

CREATING A CULTURE OF LEARNING

Creating a Culture of Learning: Intrinsic Motivation and its Practical Value
in the Wake of the COVID-19 Pandemic

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Abstract

In the wake of the COVID-19 pandemic, students of all ages were required to rapidly transition to the demands of virtual learning, resulting in general amotivation. These changes have led to poor academic performance, due to the decreased efficiency of learning processes as these students learn to cope with the instability caused by the pandemic as well as school-related changes. Intrinsic motivation, especially when cultivated within the learning process, plays an important role in student academic success and acts as an influence on holistic success in adulthood. Thus, educators must cater to the needs of this generation's students by implementing highly engaging instructional strategies to address the growing need for the development of intrinsic motivation in academia.

Keywords: intrinsic motivation, student engagement, burnout, instability, COVID-19, pandemic, autonomy

**Creating a Culture of Learning: Intrinsic Motivation and its Practical Value
in the Wake of the COVID-19 Pandemic**

The COVID-19 pandemic, beginning in March of 2020, shook the lives of many as businesses closed, events were postponed, and disease ran rampant throughout the world. Students of all ages were particularly affected by the pandemic, as schools were shut down and all learning transitioned to virtual formats. All those active in the discipline of Education during this turbulent season, including students, educators, and administration, were faced with the immediate need to transition to virtual learning formats. Virtual learning formats, especially at the onset of the COVID-19 pandemic, led to increased burnout among both educators and students. While many in the community were familiar with technology, considering its near universal use in daily life, “veteran teachers,” or educators with high seniority, often found this transition especially difficult as technology’s full integration in the form of the virtual classroom came as an unexpected and often unwelcome surprise (Zamarro et. al, 2021).

This burnout in students led to the use of already familiar online study materials, such as Quizlet or Google, to complete assignments during the period of the physical school’s closure. Many students, while coping with the trauma of the pandemic, allowed their typical academic performance and consistency in routine to falter due to a wide variety of priorities competing for their attention. While students might have functioned in this “barely there” manner during a temporary period of virtual learning, it did not mesh well with traditional in-person learning formats upon return. As the COVID-19 pandemic rages on, coupled with the turbulent nature of

childhood and adolescent life, students' engagement in schooling has hit a low point evident both in academic performance and interpersonal relations (Soland et al., 2020).

Since the pandemic, learning has been changed in powerful ways, with the proliferation of E-learning methods designed to make education more accessible to all, but the continuation of uncertainty around the pandemic has made school less important for many students. Academics have become a chore rather than a joy to pursue (Soland et al., 2020). This research examines the ways in which the educational community can bounce back from the lack of motivation and engagement brought about by COVID-19, namely the development of intrinsic motivation in the classroom. The rapid rate at which the educational community was called to respond to the COVID-19 pandemic has created a culture in which schooling is simply another part of life. Changes of this magnitude, especially in the critical developmental stages of K-12 learners, have led to increasingly negative stress, and thus poor academic performance. The development of intrinsic motivation, or the performance of a behavior for the joy gained from said behavior, is key to revitalizing the learning experience within the context of post-pandemic education. Growth of this skill facilitates the positive development of students and their teachers, as instruction then teaches students that learning can bring about a sense of purpose and fulfillment, rather than simply bring them to the next station in life.

The COVID-19 Pandemic and its Effects on the Educational Community

Upon the onset of the COVID-19 pandemic, students and teachers alike were required to transition to online learning formats for the remainder of the 2019-20 school year. These Internet-Based Learning Mediums (ILM) were already widely used within the educational community, especially at the collegiate level in circumstances where in-person learning was not

feasible, such as distance learning. However, due to the nature of K-12 education, direct instruction was traditionally face-to-face, allowing for the development of social skills alongside direct support from school faculty and staff. (Samela-Aro et al., 2021)

Past research surrounding ILMs and E-learning methods have found that motivation is key to the productive use of such platforms. In one study, researchers identified intrinsic motivation as the instigator of higher perceived enjoyment of such educational technology by post-secondary distance education students. Interest must be initiated and sustained for overall user satisfaction of such e-learning methods (Firat, 2017). High user satisfaction also relies on the perceived usefulness and prospective enjoyment of ILMs, employing both extrinsic and intrinsic motivations for successful usage (Lee, 2005).

Initial Stressors

The rapid rate at which circumstances around the pandemic changed day-to-day schooling contributed to the malformation of both extrinsic and intrinsic motivations surrounding the use of ILMs like Zoom and Microsoft Teams for regular instruction. Additionally, anxiety surrounding public and personal health became an inhibitor to productive use of the medium. Motivation researcher P-Y Oudeyer (2016) concluded that though new experiences, such as regular use of ILMs, can be a source of curiosity, a facet of intrinsic motivation, acceptance of novelty is a complex process. While previous research concludes that intrinsic motivation is a key to the acceptance of online educational technology, humans also have a tendency towards neophobia, or a fear of novelty. Neophobic learners will avoid novel experiences if a negative circumstance could arise from their participation (Oudeyer, 2016). These neophobic tendencies

could then be linked to the hesitant acceptance of ILMs by both students and teachers during the pandemic.

The rapid transition to virtual learning and other necessary responses to the pandemic, such as home-confinement, can be classified as instability, which can be defined as “the experience of change in individual or family circumstances where the change is abrupt, involuntary, and/or in a negative direction” (Sandstrom & Huerta, 2013, p. 5). According to Sandstrom and Huerta (2013), children thrive when in routine and stability. Therefore, inhibition of this routine can result in adverse development through feelings of insecurity leading to poor mental health and cognitive functioning if the child is cared for improperly following this change.

Adapting to these new routines of daily life during a pandemic was especially taxing for young children who had not yet had exposure to changes of this magnitude, leading to increasingly poor mental health. In one study, Kurdistan children between the ages of 6 and 13 were asked to artistically express their emotions, reactions, and reflections (draw/paint) during the home confinement period of the COVID-19 pandemic. Through an analysis of the artwork they created over the course of a month, researchers determined that these children were experiencing high distress, fear, loneliness, and even feelings of depression about their circumstances and the world at large (Abdulah et al., 2021).

Support was invaluable for children as they navigated these changes, especially during the earliest stages of the pandemic when all were still coping with daily changes in lifestyle. Just two weeks into the pandemic, 40.4% of the 584 Chinese youth surveyed by researchers had a tendency toward psychological problems, with specific causation lying in the absence of

sufficient education among other factors (Liang et al., 2020). This instability contributed significantly to the mental health of the world's youth resulting in a call for government assistance and intervention for the healing, or at least betterment, of young minds (Liang et al., 2020). However, children were not the only part of the population suffering from negative emotional well-being as a result of the pandemic.

Parents and guardians, in some respect, were called to a higher level of responsibility for their child's schooling during this time. However, the maintenance of their child's performance in the midst of the pandemic, a stressor which already negatively impacted many domains of adult life and proved to be a volatile entity, was considered a low emotional experience in one study. In fact, home-schooling children in response to school and non-essential business closures ranked as one of the most negative emotional experiences of the pandemic alongside obtaining news about COVID-19 (Lades et al., 2020). Increased time spent at home, especially in families of color and/or low socioeconomic status, presented risk factors for Adverse Childhood Experiences (ACE) as children were separated from social supports like teachers and extended family members due to social distancing mandates. Additional risk factors increased due to daily routine disruption, school closures, and economic instability (Bryant et al., 2020).

According to a study conducted by Tim Pressley (2021), researcher at Christopher Newport University, anxiety related to providing virtual instruction was a significant contributor to the high levels of stress among teachers during the pandemic. Many educators also expressed anxiety around uncertainty in administrative support, parental communication, and general COVID-19 anxiety as contributing factors to their stress levels. When surveying active teachers during the 2020-21 school year using a burnout scale ranging from 6 to 36, with 6 representative

of low burnout levels and 36 being that of high burnout, Pressley (2021) found the scores averaging approximately 24.85. This burnout and stress among teachers regarding job performance was evident and mirrored by their students during the pandemic.

Scholars at the University of California at Berkley state the relationship between student and teacher is one of consistent feedback and mutuality. Students pull much of their motivation for high performance from their teachers or other academic mentors, especially in the setting in which praise or rewards for achievement are scarce. Meanwhile, their instructors derive much of their personal value and purpose within this role from the expressed gratitude of their students. In circumstances where one or both factors in maintaining this feedback are missing, the student-teacher dynamic has the potential to become antagonistic, leading to discouragement among all parties (Covington et al., 2017).

Eventual Burnout

As the personal well-being of both students and teachers became increasingly unhealthy, these relationships began to fall apart. The continual stress caused by the pandemic and the necessary adjustments of all parties to its demands led to the development of burnout, which researchers define as “a psychological phenomenon of prolonged exhaustion and disinterest” (Alarcon et al., 2011, p. 213). Also, as feelings of burnout increase within an individual, its effects begin to spiral out of control as those who experience the burnout lack sufficient energy to cope with such effects in a healthy and productive way (Alarcon et al., 2011).

Coupled with developmental complexities of K-12 youth, burnout is a high risk indicator for poor holistic functioning. According to researchers at the University of Helsinki, “school

burnout is approached as a mismatch between individual's socio-emotional skills and demands imposed by the school context which cause students to experience depletion of energy without gaining appropriate returns" (Sarmelo-Aro et al., 2021, p. 797). Using this background, research was conducted to examine the burnout levels among Finnish students from Fall 2020 to Fall 2021, made especially pertinent to understanding the effects of COVID-19 on adolescent well-being. Data collected from these students on burnout showed positive correlation to instability surrounding the COVID-19 pandemic, a potentially negative circumstance for children.

However, students who displayed high social skills when initially surveyed were more stable in a socio-emotional respect post-home isolation (Salmela-Aro et al., 2021). While this boded well for older students who had more time to develop such skills, the transition meant younger children were disadvantaged, as the social nature of regular schooling deprived them of key socialization opportunities in which they learn these invaluable social skills. This lack of instruction then spirals as this lack of skill development puts children at a higher risk for school burnout (Salmela-Aro et al., 2021).

The lack of available resources, such as energy and motivation, typically associated with the burnout state can also result in below-level academic achievement (Alarcon et al., 2010). Burnout's characteristics, namely exhaustion and cynicism, have been linked to absenteeism and learned helplessness in work related activities. This learned helplessness, or repeated poor performance resulting in passive acceptance of the behavior's consequences, when associated with burnout brings about a lack of effort and reduced academic efficacy. In one study, researchers identified burnout as "a significant negative predictor of achievement" (Madigan & Curran, 2021, p. 398). Academic performance was especially affected by the reduction of

efficacy, which was observed to have deeper developmental ties as avoidance behaviors were associated with negative self-perception. Additionally, cynicism as a characteristic of burnout, already high due to the worries of the pandemic, when manifested in the academic environment led to withdrawal, yielding poorer achievement than students who presented markedly less cynicism (Madigan & Curran, 2021).

Burnout is contrasted with engagement, “a positive, fulfilling state of work that is defined by vigor and dedication” (Alarcon et al., 2010, p. 213). Vigor, or the positive headspace, leads to the development of dedication, whose characteristics of enthusiasm, pride, and inspiration strongly align with high intrinsic task motivation (Alarcon et al., 2010). The development of healthy engagement within the academic setting is of the utmost importance considering the high prevalence of burnout in youth during the pandemic. Student burnout has also been tied to “worse academic achievement in school, college, and university” (Madigan & Curran, 2021, p. 387). Thus, the educational community must intentionally scaffold students in the development of positive engagement in the post-COVID classroom, as its effects are paramount to holistic student success.

Intrinsic Motivation and the Learning Process

Intrinsic Motivation (IM) is a type of motivation in which behavior is performed by an individual for no benefit other than the intrinsic value the subject has placed upon it. IM is directly contrasted with Extrinsic Motivation (EM) which is the motivation to complete a behavior given by factors outside of the individual such as a physical reward or outward praise. Due to its nature as a self-motivating state, IM, when developed in youth has amazing potential

to direct positive achievement and engagement in the classroom environment, or wherever learning may occur for the individual.

Especially in youth, whose worlds are largely unexplored, curiosity is a driving factor in the development of IM towards a specific activity or behavior. Novelty has the potential to drive the experience of IM as individuals pursue behaviors which are perceived as challenging or fun, seeking further similar experiences for this sole reason. Humans gravitate toward these novel experiences due to their nature as information-processing systems, seeking to understand incongruent, ambiguous, or otherwise creating a gap within the known and unknown. This search for knowledge is intrinsically motivating even to a neurological level as its acquisition triggers a dopaminergic response within the brain. Dopamine, the neurotransmitter which helps to form the link between stimulus and reward, is released when new information is acquired, making IM associations stronger upon each instance of learning (Oudeyer et al., 2016).

Developing a Work “Flow”

While IM is a large-scale construct that must be continually developed for efficient application, its momentary importance presents itself as a state in which the learner functions. In his work entitled *Flow: The Psychology of Optimal Experience*, Mihaly Csikszentmihalyi (2008) describes this state of intrinsically motivating work as “Flow.” According to Csikszentmihalyi, the satisfaction of an individual within the learning environment must be one of continual progress. Flow is achieved when an individual completing a task possesses adequate skills to succeed at the present challenge. Additionally, the challenge presented must meet or exceed skill level if learning is to continue in an upward progression. With practice, individuals can manifest

the state of Flow on command; a skill more easily acquired through exposure in youth (Csikszentmihalyi, 2008).

Parents, teachers, and other instructors who shape a child's learning experience can help prompt the development of Flow by creating an environment characterized by clarity, centering, choice, commitment, and challenge (Csikszentmihalyi, 2008). By creating a context in which children can explore their environment with learning scaffolded by facilitating adults, children can experience the essential characteristics of Flow which can then be manipulated according to their personal preference. Csikszentmihalyi argues that in this environment, "they are free to develop interests in activities that will expand their selves," rather than build their sense of self based on the approval or preferences of others (Csikszentmihalyi, 2008, p. 89).

Within the development of the learner as a complex being, IM fostered through novel experiences and activities allows for the develop higher order processing skills and other meta-cognitive abilities which allow for future learning in the future (Larson & Rusk, 2000). In this respect, Csikszentmihalyi's research on the Flow state works alongside neuroscience to discover how the state of IM can be harnessed, as it presents such high benefit for growing learners. Young people, cognizant of their holistic background, then have the potential to discover what they enjoy and invest in said interest through the cultivation of an IM state (Csikszentmihalyi, 2008). The educator or other instructor then acts as a facilitator to this process, presenting a variety of activities and topics to students to engage their curiosity in a way that prompts IM (Larson & Rusk, 2000).

Within both the spheres of novelty and challenge, the presented experience must lie in a middle ground which prevents under-stimulation as well as burnout from the over-exhaustion of

one's skills: an intermediate. By linking these findings about IM's relationship with novelty and challenge, researchers have proposed a construct called The Learning Progress Hypothesis (Oudeyer et al., 2016). This hypothesis suggests the positive gain from the learning process creates a feedback loop that fosters motivation for continued progress along that same path. Comparable to scaffolding, in which a learner's competency and reinforcement of one skill builds onto the acquisition of another, more complex skill, the Learning Progress Hypothesis suggests that motivation can be developed in a similar way (Oudeyer et al., 2016). This system highlights the development of the learner rather than achievement, bolstering an instructional philosophy called "The Growth Mindset" developed by Dr. Carol Dweck, a professor of psychology and researcher at Stanford University.

Importance of Maintaining a Growth Mindset

Dr. Dweck (2006), in her work *Mindset: The New Psychology of Success*, details specific application of the growth mindset in an experimental setting and its subsequent effects on academic achievement in students. In one such study, adolescent students were separated into two groups to be taught material for an upcoming examination. The first group of students, during the independent practice portion of the day's instruction, received feedback related to the quality of their work with such phrases as "Good job" or "You are so great at this." Meanwhile, the second group received feedback highlighting the process and effort students put into their work. Such feedback would consist of phrases like, "I can tell you worked really hard on this" and others which praised progress and investment (Dweck, 2006, p. 17). Each group was then presented with a choice for their examination. Students were given the choice between an easy exam or a more challenging exam, in which they were told that they would learn more. Dweck

found that the students in the first group consistently chose to take the easier exam, while those in the second group opted for the more challenging assessment (Dweck, 2006).

The difference between these groups is that of mindset. The first group, instructed within the fixed mindset, or the belief in the static nature of intelligence, had high motivation for the subject which was then warped over the course of the instruction. According to Dweck, students with this mindset “stayed interested *only when they did well right away*” (Dweck, 2006, p. 23). This mindset then resulted in consistently lower engagement in the learning process as academic performance/achievement became a determining factor of future enjoyment in the classroom setting (Dweck, 2006). The fixed mindset creates a reliance on high performance, leading to academic insecurity and a generalized fear of failure as students progress into adulthood. This fear impedes the learning process as the process itself no longer holds precedence, leading students to avoid novelty and challenge to remain within their zone of probable success (Dweck, 2006).

The second group was instructed within what Dr. Dweck calls, the Growth Mindset. Defined, the growth mindset is the belief that the learner can grow in intelligence over time, an essentially dynamic trait (Dweck, 2006). As illustrated by the result of Dweck’s experiment, learners that have been taught to process their surroundings through the growth mindset framework approach challenge and novelty as a steppingstone towards progress rather than an opportunity for failure (Dweck, 2006). This change in mindset primes children for the development of resilience and what Dr. Angela Duckworth, University of Pennsylvania professor of psychology termed, grit (Duckworth, 2016).

First studied within the context of the introductory bootcamp at West Point Military Academy, grit is a “combination of passion and perseverance” (Duckworth, 2016, p. 16). As opposed to the school’s Whole Candidate Score, which sought to determine the fitness of a potential student for West Point’s holistic demands, grit emerged as the foremost determining factor in West Point’s retention rate upon the conclusion of the bootcamp which its cadets lovingly referred to as “the Beast” (Duckworth et al., 2007). However, grit’s influence reaches further than the campus of West Point Military Academy, as Duckworth’s research has found that grit leads to higher holistic achievement at all ages. The discipline inherent within grittiness cultivates high engagement and motivation in all spheres where sustained effort contributes to achievement (Duckworth et al., 2007).

When seeking to develop grit in children, the learning environment must be one in which children can seek out their own interests with the supportive guidance of their parents, teachers, or other adult influences (Duckworth, 2016). Duckworth argues such influential figures “appreciate that children need love, limits, and latitude to reach their full potential. Their authority is based on knowledge and wisdom, rather than power” (Duckworth, 2016, p. 175).

Coupled with self-control, the development of grit leads to high, specialized achievement as individuals have assigned high value to their goals in the long and short-term spheres (Duckworth, 2016). The assignment of value is what brings this equation full circle, as personal value is a determining factor of an intrinsic motivation toward a specific goal, behavior, or activity. Within the concept of IM, something holds value for its own sake; it is valuable for the pleasure that it brings to the individual (Gottfried et al., 2001).

Academic Intrinsic Motivation and Achievement

Within IM lies the field of Academic Intrinsic Motivation, originally proposed by Dr. Adele Eskeles Gottfried in 1985, pertaining to satisfaction derived from the learning process specifically within the school setting. Such motivation is characterized by “mastery orientation; curiosity; persistence; task endogeneity; and the learning of challenging, difficult, and novel tasks” (Gottfried et al., 2001, p. 3).

General Satisfaction from the Learning Process

In one longitudinal study, Gottfried (2001) followed a cohort of elementary-age students from California and tracked their academic IM over time. Beginning at age nine, students typically showed notable academic IM. Its early presence served as an indicator for further development into adolescence. Furthermore, this motivation, with the increasingly complex nature of the developing brain and course demands, followed suit. As academic demands continued to branch out, academic IM varied at the individual level. For example, one student’s IM may have declined in math while another’s increased. Reasons for such variance are just as variable as the fluctuation itself, as each student faces a different set of circumstances within the school, home, and personal psyche (Gottfried et al., 2001). Overall, the results of this study show that academic IM generally decreases as students progress through school, however increases are possible through the implementation of practices and supportive environments that have been shown to be related to higher levels of intrinsic motivation” (Gottfried et al., 2001, p. 11).

High academic IM has served as a predictor of high academic achievement, and in turn students with low academic IM are at risk for low level performance (Gottfried et al., 2001). As research on the correlation of IM and school achievement persists, researchers find that “Intrinsic

motivation is the *only* (emphasis added) consistent predictor of academic achievement across different school contexts and different cultures” (Taylor et al., 2014).

Autonomy and Self-Determination Theory

The issue of academic intrinsic motivation becomes even more nuanced when one considers the concept within the realm of Self-Determination Theory, first proposed by researchers Edward L. Deci and Richard M. Ryan (2000) as a function of autonomy. Foundational research conducted by Richard DeCharms (1968), most notable for his work *Personal Causation: The Internal Effective Determinants of Behavior*, finds that autonomous action is brought about by a sense of personal choice and is representative of an internal locus of causality.

Deci and Ryan’s Self-Determination Theory dichotomizes motivation into three major categories located on a spectrum of increasing autonomy: *external*, *introjected*, and *identified regulation* (Taylor et al, 2014). *External regulation*, the least autonomous of the three, is closest to the concept of extrinsic motivation as the behavior is initiated by a reward outside of the self. *Introjected regulation*, most closely tied to the pursuit of academic validation in students, is experienced when the regulation is internalized yet not valued as a part of one’s self but as a response to pressure. The most autonomous of the three, *identified regulation*, occurs when the behavior has been associated with one’s sense of self (Taylor, et al., 2014). Within the SDT framework, the above regulations are classified as extrinsic motivations, as motivations is pulled from outside of the self. While extrinsic motivation is typically viewed in a negative light in contrast to intrinsic motivation, classifications higher on the autonomy scale can be active and engaging within the classroom setting (Saeed & Zyngier, 2012).

IM is more closely tied to the latter two types of regulation, as the sense of autonomy is high in both. In fact, IM was used as a foundation for Ryan and Deci's 1985 innovations in autonomy research, essentially a prototype for its understanding (Taylor et al., 2014). To some degree, intrinsic motivation must be present within an individual for autonomy to be exercised to its fullest potential. The learning environment must promote healthy, learner-led discovery to support the developmental progression of learners who can confidently make their own decisions.

Burnout and Intrinsic Motivation

The examination of burnout's relationship to motivation, especially IM, begins with the foundational understanding that motivation and energy (mental or physical) are finite resources within the individual. Thus, motivation has the capacity to be spent and earned, much like currency, an energies resource. Within the framework of the Conservation of Resources Theory, "energies are resources valued for their aid in acquiring other resources" (Alarcon et al., 2010, p. 212). Among other resource types (objects, conditions, personal characteristics), individuals pull from their available energies to cope with stress caused by the lack or inefficient use of other resources. However, when the individual's bank of available resources is already low, "the more maladaptive coping will be employed when people face demands, leading to fewer resources" (Alarcon et al., 2010, p. 212).

When students, or learners on a larger scale, lack the resources to fully invest in their environment in a way that is enriching, they experience the phenomenon psychologists call burnout. The stress caused by this lack of resources then causes the expenditure of other available resources, facilitating a cycle of maladaptive coping strategies (Alarcon et al, 2010).

Re-evaluating the subject of burnout, a key variable for examination when attempting to understand the impact of COVID-19 within the educational sphere, also functions as a key to responsive and reflective practice.

Alarcon (2010) asserts that engagement is the functional opposite of burnout within the framework of the Conservation of Resources (COR) theory, as individuals have adequate resources to approach their environment in meaningful ways and cope in productive ways. In an academic sense, “engagement is viewed...as very important for the enhanced learning outcomes of all students” (Saeed & Zyngier, 2012, p. 252). While individual student engagement is of high importance to learning outcomes, the work presented within the classroom or other educational setting also influences engagement. Engaging work, in comparison to work that is repetitive or thoughtless, “allows for creativity, sparked curiosity, provided an opportunity to work with others, and produced a feeling of success” (Saeed & Zyngier, 2012, p. 253). Many of the characteristics of engaging work, therefore, align with characteristics of activity that is intrinsically motivating (namely curiosity and creativity). To the credit of this work, engaged students within the learning environment respond to change and challenge in a healthy way, as shown exemplified in the scholarship of Dr. Dweck and Dr. Duckworth.

Author Phillip C. Schlectly (2001) dichotomized engagement into 5 levels, organized on a continuum from lowest to highest engagement. Such consist of: Rebellion, Retreatism, Passive Compliance, Ritual, and Authentic. Where a student falls on this continuum is dependent on a myriad of factors such as “response to the work, the context, the time of day, the teacher, and peers” (Saeed & Zyngier, 2012, p. 256). While the SDT framework presented by Deci and Ryan (2000) examines motivations levels rather than engagement, many believe the frameworks run

parallel to one another, implying a strong connection between the two in case specific applications (Saeed & Zyngier, 2012).

In a sense, motivation predates engagement, whether that motivation be intrinsic, extrinsic or a combination of both, and its presence allows for healthy, long-term engagement. While previous research showed a positive correlation between IM and academic achievement, a study conducted by researchers at Monash University sought to expand scholarship surrounding the benefits to utilizing other types of motivation in students. Gathering qualitative data directly from students in grades five and six, Saeed and Zyngier (2012) found that students who showed intrinsic task motivation were authentically engaged in classroom activities. Meanwhile, students who were amotivated, or showing a lack of motivation typically presented a rebellious engagement type. In another study, researchers found that IM decreased feeling of amotivation in students (Taylor et al., 2014). These findings further bolster the relationship between student motivation and engagement as well as the relationship between both SDT and engagement typology frameworks (Saeed & Zyngier, 2012).

Pedagogical Frameworks to Maximize Student IM and Engagement

Cultivating IM in the classroom takes intentional effort as teachers seek to create a space in which students can broaden their horizons intellectually in a way that is driven by genuine interest. Educators, especially in the post-COVID era, have the unique opportunity to approach their instruction in a way that is holistically beneficial for their students; creating a culture in which learning can be exciting and self-motivating. Such pursuit necessitates reflection on pedagogical and instructional methods as the educational community seeks to better serve the next generation's children.

Individualizing Student Care and Differentiation

Time and time again, educators are presented with the declaration, “they don’t care about what you know until they know that you care,” reflecting on the high importance of relationship building in the teaching profession. In the post-COVID era more than ever, students need individualized care that meets them in the midst of instability. Educators are given the unique position to fully grasp and meet these needs as they meet with students on a near-daily basis.

When approached through the framework of the COR theory, educators have the ability to provide students with resources which allow them to respond to their environment in healthier ways; resources which may not be available to them on their own. By responding to implicit as well as explicitly expressed student need, the classroom becomes a safer place for students to explore their environment without the inhibition of outside stress caused by the lack of appropriate resources or coping skills (Alarcon et al., 2010).

These resources, inclusive of anything from extra time to one-on-one instruction time to encouragement in pursuit of an academic goal, have been proven to increase IM in students. In one study conducted by Dr. Gottfried (1994) examined the role of parental involvement in student academic IM by following a cohort of 9-year-old children through age 10. Gottfried’s findings suggest that task endogeny, as opposed to task-extrinsic practices, when modeled within the home as well as in the classroom, increase a student’s feeling of IM by 19%. Additionally, those who were primed with IM at an early age and given the resources to cultivate it on their own maintained feelings of IM through the next year (Gottfried et al., 1994).

Differentiating according to what is known about the student will allow them to feel safer within the environment, as they begin to view the space and their learning as something that they can claim ownership of. This transition fits within Deci & Ryan's (2000) SDT model, as motivation is positively correlated with autonomy.

Reclaiming the Student-Teacher Relationship

The dynamic between teacher and student is paralleled only by those of parents and children, as they are interpersonal relationships designed to foster growth, both personally and intellectually. Just as the parent sets the groundwork for the child's future life experience, the child constantly is teaching the parent as each of them embark on the journey of parenting together. The student-teacher relationship is similar in the way that both parties are presented with new information by the other in either formal and/or informal settings. In other words, the relationship is centered around a perpetual feedback loop that informs future behavior for both the student and the teacher.

Researchers Alioon and Delialioğlu (2019), when researching this feedback loop, found the relationship was intimately linked to motivation as both parties relied on motivation from the other to find it within themselves. Students are receptive to the energy of their teachers, informing their motivation and engagement for learning, while teachers rely on student encouragement and success as an affirmation to continue teaching said students (Alioon & Delialioğlu, 2019). However, COVID-19 and the instability brought about by home-confinement and necessary disruption of regular classroom routines acted as a stressor for both students and teachers, inhibiting their effective resource management leading to burnout and lack of motivation. These unprecedented changes and the ways in which all were required to recover

from them stunted the way students looked at school and learning. School and learning often become more of a chore than an enjoyable experience.

Students seek to be actively involved in their learning and often find fulfillment and joy from discovering and understanding new concepts. Amidst teaching new material, educator's duty is to encourage this association between learning and joy leading to the formation of academic IM in students. Dr. Maria Montessori (1988) spearheaded this view of the classroom teacher as a facilitator of learning in her book *Discovery of the Child*, first published in 1948. Montessori describes the teacher as having two main functions; "in the first she puts the child in contact with the material and initiates him in its use. In the second, she intervenes to enlighten a child who has already succeeded in distinguishing differences through his own spontaneous efforts" (Montessori, 1988, p. 153). The Montessori classroom then reorients learning into a highly student-led experience, facilitating the development of IM within children by allowing them to explore the things that draw their interest on their own timing.

Teachers in this setting are called to be guideposts, giving voice and clarification to the thoughts and feelings that the students find along their journey to further understanding. Thus, "A teacher must busy herself with finding more new names to satisfy the insatiable demands of her young charges" (Montessori, 1988, p. 216).

While the laissez-faire nature of the Montessori method allows for the development of IM without boundaries, balance is key in maintaining a healthy, safe environment for all learners, especially in the realm of classroom management. In the post-pandemic era, both students and teachers must work together to create a space in which passion for learning can be rediscovered and even redefined.

Redefining the Goal of Learning

In an era in which school accountability revolves around student performance on standardized testing, many students have become burnt out, because the summation of their learning is targeted at a test or series of assessments. Test scores, in most cases, stimulate the development of extrinsic motivation towards learning. However, educators have the opportunity to reorient student motivation, and subsequently engagement, through the inclusion of variety in assessment or other “noncompetitive definitions of success and personal excellence” (Covington et al., 2017, p. 87).

As examined through the scholarship of Dr. Carol Dweck (2006), students intentionally pursue challenging experiences that bring about growth when progress and effort are praised within the classroom. In fact, students have the natural desire to grow in understanding and the mind seeks to discover unfamiliar, incongruent, or otherwise novel experiences (Oudeyer et al., 2016). Traditional education takes these natural pursuits and incentivizes them using praise based on performance; academic distinctions such as honor roll, or even a coupon for a personal pan pizza at Pizza Hut as part of their K-6 ‘Book It!’ reading program (BOOK IT! for Schools, 2022).

When educators reframe the goal of student achievement in the light of progress and holistic growth, students themselves learn to seek out said growth. Csikszentmihalyi (2008) affirms this through the intentional presentation of the Flow model within the classroom. When the framework is taught explicitly within the learning environment, students can more effectively cultivate it with regular practice. Thus, Flow can be more easily achieved outside of the classroom setting (Csikszentmihalyi, 2008, p. 141).

With the rise of standardized K-12 assessment, learning has become more quantifiable. Many parents and community members then look toward school-specific test results to inform their decisions about zoning for children. UK House of Lords member Onora O'Neill suggests that drawing these conclusions may distort the primary activities of schools, that school accountability should “communicate...relevant evidence that can be assessed by those to whom professionals and institutions are accountable” (O'Neill, 2013, p. 4). As the definition of learning shifts within the classroom or school, grading and educational policy must shift along with it (O'Neill, 2013).

Instructional Design Strategies to Maximize Student IM and Engagement

As educators seek to reform the way they approach their learners, the pedagogical requires translation to day-to-day classroom instruction. While IM is sought and found through a variety of ways at the individual student level, the practices below can be implemented in ones UDL or Universal Design of Learning as teachers seek to reach all students.

Highlighting Student Choice

Finding itself under the umbrella of differentiation, student choice is an important way in which educators can spark intrinsic engagement within their students, thus positively affecting the quality of their work. Giving students the opportunity to choose what they find the most interesting topic of study within the class content allows for increasing autonomy and confidence in the material as the knowledge can then “enhance a sense of personal ownership” (Covington et al., 2017, p. 93).

Martin V. Covington, late professor of psychology at the University of California Berkley, advocates for the assignment of interest-driven research projects, driving IM as students “personal interest acts in service of a larger, more inclusive pedagogical objective” (Covington et al., 2017, p. 92). When the acquisition of knowledge is viewed as a personal goal, rather than an academic goal, its pursuit becomes task specific. This establishes an academic environment where inquiry is praised, a reflection or interest rather than ignorance or indicative of low-level performance (Covington et al., 2017). Inquiry, to bolster this ideal, must be accepted freely and without judgement; leaving the student with a sense of contentment which establishes a positive feedback loop to motivate further learning (Oudeyer et al., 2016). Additionally, successful student-led work fosters a sense of academic success competency, which students often seek in school, leading to future engagement (Stephens, n.d.).

Facilitating Collaboration

Especially in post-COVID schooling, students need inter-personal collaboration as so much of the socialization that occurs in the classroom setting was lost due to home confinement. In the pursuit of creating a culture of authentic engagement, educators must actively implement practices that make their classroom a safe and enjoyable place to learn. Facilitating student collaboration is an easy way to encourage the development of a healthy classroom culture.

Collaboration can be classified within various dynamics, namely student to student, teacher to student, and student to community. Engaging activities, as opposed to repetitive or laborious activities, often employ real-life connections as IM is raised within students when they feel their work is positively changing the world around them. For example, when a student is studying plant growth over time, they could complete a science experiment within the home or

even virtually due to COVID-19 protocols. While this activity serves an academic purpose, many students may find it beneath their level of intermediate challenge resulting in boredom and task amotivation. A class could explore biological content along the same lines as the former activity through planting produce in a community garden and documenting growth over time, a form of student to community collaboration. Such activities promote IM in students as they observe that their behavior has sparks positive change beyond themselves.

Scholar Elaine Clanton Harpine (2019), as recorded in her book *After-School Programming and Intrinsic Motivation: Teaching At-Risk Students to Read*, worked with educators to develop a reading program for urban youth. After eight years of perfecting the program, Clanton Harpine (2019) found students are more likely to be intrinsically motivated when working alongside others on their same academic level. In workstations, students worked toward individual progress with those at their level rather than in their respective age groups. This afforded students the opportunity to build relationships that they would not have invested in otherwise (Clanton Harpine, 2019). Affirmed by Dr. Dweck's Growth Mindset framework, the students thrived personally and intellectually when the focus was shifted from performance to progress.

In such programs, students worked on weekly, hands-on projects in an environment whose main goal was to develop "children [who] read because they want to read, not because they are required to or want to obtain a prize or reward" (Clanton Harpine, 2019, p. 74). Through this tangible connection to the material manifested in projects and individualized workstations, students find IM for the learning process as they have become "a part of a supportive productive group" (Clanton Harpine, 2019, p. 75). Collaboration itself becomes a motivating factor when a

community-oriented goal, whether building or bolstering the culture, is explicitly expressed, and rewarding to the student.

Building Personal Accountability through Competency

Previous scholarship, most notable Ryan & Deci's (2000) SDT framework, affirms that students find their motivation to learn intrinsic and subsequent engagement authentic when they prove themselves competent within a certain skill or responsibility. Paralleling the eight psychosocial stages presented by Erik Erikson (2014) in his 1950 work *Childhood and Society*, school age children fit within the construct of Industry versus Inferiority. Children caught in this developmental stage seek to be productive and successful in a way that will be noticed by those around them, they seek accomplishment. Without recognizing a child's achievement through school, sports, or other high-value activities that they claim as a portion of their identity, the child may begin to feel inferior about themselves in comparison to their peers (Erikson, 2014).

Teachers can fulfill this developmental need by intentionally placing opportunities for personal recognition and participation within the classroom. For example, the teacher may assign students various classroom jobs such as meteorologist, giving the weather report to the class each day, or resource coordinator, responsible for the distribution of whiteboards or other classroom materials when necessary for the day's activities. This bolsters the student's sense of autonomy and competence, as they gain satisfaction from having positively contributed to the classroom, while also creating opportunities to build their capacity for self-regulatory behavior. Self-regulation is the effort by the individual to act in accordance with "established or preferred standards" (Dhiman et al., 2018, p. 82). Clearly establishing these standards with students allows them to strive for tangible, defined goals whose accomplishment will create a feedback loop in

which that feeling of excellence is viewed as its own intrinsically motivating reward (Duckworth, 2016).

As students return to in-person schooling after their hiatus due to the COVID-19 pandemic, educators must be prepared to meet them in a posture of care, as all are recovering from the fallout of instability. However, students also must remember how to learn in a way that does not feel like a chore as encountered during the high stress environment caused by the pandemic (Sandstrom & Huerta, 2013). Teachers are called on to revitalize their classroom environments, to excite learners, and create a culture where learning becomes its own reward. By implementing pedagogical frameworks and instructional design strategies that maximize student IM and engagement, a post-pandemic culture of learning will be awakened in the lives of students as well as the educational community.

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