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Intrinsic Motivation for Adolescents in the Classroom

By Owen Luo

AUTHOR BIOGRAPHY

Owen Luo is a rising senior at Sierra Canyon School who plans to major in psychology. His interest in student motivation stems from his work as a volunteer instructor at a math circle. Designing and teaching problem-solving lessons weekly for elementary students has led him to develop a curiosity about what keeps adolescents genuinely engaged in their schoolwork. This literature review reflects that interest, drawing on research in adolescent motivation to identify practical ways teachers can support intrinsic motivation in the classroom.

ABSTRACT

Many students become less motivated as they enter early adolescence, around the transition to middle school at ages 11 to 12. This essay goes into what teachers can do during this period to support intrinsic motivation, which is the drive to do schoolwork because it is interesting or satisfying in itself rather than to earn a reward or to avoid punishment. The paper begins by reviewing three theories of motivation: Self-Determination Theory, which describes the basic psychological needs of autonomy, competence, and relatedness that motivation depends on; the Stage-Environment Fit model, which explains why the typical middle-school classroom stops meeting those needs; and Situated Expectancy-Value Theory, which explains how a student decides whether a task is worth their effort, including how the way they think about the future shapes that decision. It is explained why these theories were chosen over others given the context of field and intention. The essay then turns to practical implications, drawing on studies of real classrooms to suggest what teachers can do. Structured choice, specific task-focused feedback, brief personal check-ins, a focus on improvement rather than ranking, and short writing tasks that connect schoolwork to real life each restore part of what the transition to middle school takes away. Together, these ideas suggest that the drop in motivation is not inevitable but is shaped by the classroom, and that small, low-cost changes can help keep adolescents motivated to learn.

Keywords: *intrinsic motivation, adolescents, self-determination theory, autonomy, competence, relatedness, stage-environment fit, expectancy-value theory, classroom motivation, utility value, feedback, middle school*

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Intrinsic motivation is the drive to do something because it is interesting or satisfying in itself, rather than for a reward or to avoid punishment (Ryan & Deci, 2000). There is a trend of students around ages 11 to 12 becoming less motivated and engaged in school (Eccles & Roeser, 2009), so it is necessary to understand why and address this issue. The goal of this paper is to identify the primary contributors to intrinsic motivation in adolescents and the methods used to harness them in the classroom environment. The paper will begin with a review of theories related to motivation. These theories include Self-Determination Theory (Ryan & Deci, 2000), which describes the basic psychological needs that motivation depends on; the Stage-Environment Fit model (Eccles & Roeser, 2009), which explains why the classroom environment often fails to meet these psychological needs; and Situated Expectancy-Value Theory (Eccles & Wigfield, 2020), which explains how a student decides whether a task is worth the effort, including how the way they think about the future shapes this decision. The paper will then turn to the practical implications of these theories, discussing how teachers can incorporate these ideas in the classroom to retain student motivation.

METHODOLOGY

Motivation is studied across several traditions within psychology. These traditions include achievement motivation, need-based accounts, and socio-cognitive accounts of belief and value (Eccles & Wigfield, 2002). This paper works within educational psychology, the field concerned with motivation as it appears in schools, and narrows further to theories that have been tested in the classroom and translated into practices teachers can use.

The paper's sources were chosen to build an argument rather than gathered through an exhaustive search of the field. The literature review focuses on early adolescence, around the transition from elementary to middle school; on the ordinary classroom rather than clinical settings; and on intrinsic motivation and engagement as the outcomes of interest rather than grades or test scores.

Sources were identified through Google Scholar using search terms such as intrinsic motivation, adolescent motivation, middle school transition, self-determination, expectancy-value, autonomy support, and classroom climate. Approximately 40 articles were identified and screened: 18 were read in full, and 13 were kept for review. An article was retained if it dealt directly with motivation in adolescents or in classrooms, and if it either stated a foundational theory or tested one in a way that could be translated into classroom practice.

Three filters then determined which theories to review. First, a theory had to locate motivation in the interaction between a student and their environment, not within the student alone. Second, it had to be relevant to early adolescence and the move to middle school. Finally, it had to have been tested in real classrooms. The first filter is the most discriminating. This paper argues that the drop in motivation is a property of the

classroom and can therefore be changed. A theory built on fixed traits or differences in abilities cannot support that argument.

Self-Determination Theory, Stage-Environment Fit, and Situated Expectancy-Value Theory pass all three filters. Each addresses a different question: Self-Determination Theory describes what students need, Stage-Environment Fit explains why the middle school environment stops meeting those needs at this particular age, and Situated Expectancy-Value Theory explains how a student decides whether the work is worth the effort. Together, the theories map out a process: what a student needs, the environment that fails to supply them, and the decision the student then makes. These theories were chosen because they follow that sequence.

This selection process leaves out several recognized theories of motivation. Achievement Goal Theory—whether students pursue work to master material or outperform others—is a notable example, though it is not entirely absent: it is shown through Eccles and Roeser’s (2009) contrast between mastery-focused and performance-focused classrooms. Attribution Theory—how students explain their outcomes, to ability, effort, or luck—and Mindset Theory—whether students believe ability is fixed or can grow—were both set aside under the first filter because they locate motivation in how a student explains outcomes and judges their own ability, rather than in the environment (Eccles & Wigfield, 2002). Attribution Theory’s main classroom practices relate to feedback, which this paper already covers through Hattie and Timperley (2007). Self-efficacy was set aside because it covers much of the same ground that expectancy already covers in Situated Expectancy-Value Theory.

The decision to focus on Self-Determination Theory, Stage-Environment Fit, and Situated Expectancy-Value Theory limits the perspective the literature review can offer because all three theories share the assumption that motivation is shaped by a student’s environment. Therefore, the review cannot account for motivation placed outside environments entirely, such as in temperament or in differences in ability. Because sources were chosen purposefully rather than systematically, there is a risk that the studies included may lean toward findings that support the argument. The five recommendations are drawn together here from studies that each tested them separately. No study has tested them simultaneously as a combined intervention program. A more comprehensive review would examine more frameworks, which would allow more concepts in this paper to be explained rather than only observed.

SELF-DETERMINATION THEORY

Self-Determination Theory (SDT) is one of the frameworks used for understanding what drives people. Ryan and Deci (2000) claim that humans are naturally curious and motivated, so it is logical to look into the conditions that promote or deplete this motivation. They separate motivation into two categories: intrinsic motivation, which is doing something for the enjoyment of it, and extrinsic motivation, which is doing

something for an outside reason such as receiving a reward or avoiding a punishment. One important idea in SDT is that the type of motivation matters more than the amount. Two students can both be motivated to do their work but for different reasons, and those reasons may lead to different results. A student working to avoid punishment or to earn a reward compared to a student working because they find the subject meaningful or fun might put in a similar level of effort, but the second student will usually learn more deeply and persist longer (Deci & Ryan, 2008).

SDT mainly relies upon three basic psychological needs that all people share: autonomy, competence, and relatedness (Ryan & Deci, 2000). Autonomy is the feeling that one's actions come from oneself. Competence is the feeling of being capable. Relatedness is the feeling of being connected to and cared for by other people. When the environment meets these needs, people become motivated; when it blocks them, people can become passive and disengaged.

To explain how the environment changes intrinsic motivation, Ryan and Deci (2000) describe a part of the theory called Cognitive Evaluation Theory, which focuses on the needs for competence and autonomy. Events that help a person feel competent—such as giving the right level of challenge or positive feedback—tend to raise intrinsic motivation, while negative feedback tends to lower it. However, feeling competent is not enough by itself. Competence only boosts intrinsic motivation when a person also feels that their actions are their own. Thus, a student who has a sense of competence but feels controlled will not become more motivated, which reflects the importance of autonomy. This is why autonomy-supporting teachers—who give choices and explain their reasoning—tend to nurture students who are more curious and motivated, while controlling teachers cause students to lose interest and engage even less.

Relatedness, the third need, also contributes to intrinsic motivation, but in a more indirect way. Ryan and Deci (2000) explain that intrinsic motivation is more likely to grow in a setting where people feel safe and connected. They point to studies showing that children explore more and stay more curious when they feel attached to an adult, and that students who are less attached to their teachers show less intrinsic motivation. People can enjoy activities on their own, but having a caring relationship in the background is what gives students the security to stay engaged. This is especially important for younger students because they are sensitive to what the adults around them think.

Leveresen et al. (2012) studied a large sample of 3,273 Norwegian adolescents to see whether taking part in leisure activities improved their life satisfaction. They found that simply taking part in an activity did not improve well-being on its own. The benefit only occurred when the activity met the three needs; it was not participation, but need satisfaction, that mattered. Feeling competent was the most strongly correlated with life satisfaction, and feeling related to others also helped, while autonomy was less of an indicator. The three needs

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explained the differences in life satisfaction among the adolescents. The authors warn that programs which fail to meet these needs may do little good, and can even have a negative impact on students, so the quality of the activity matters more than the participation itself.

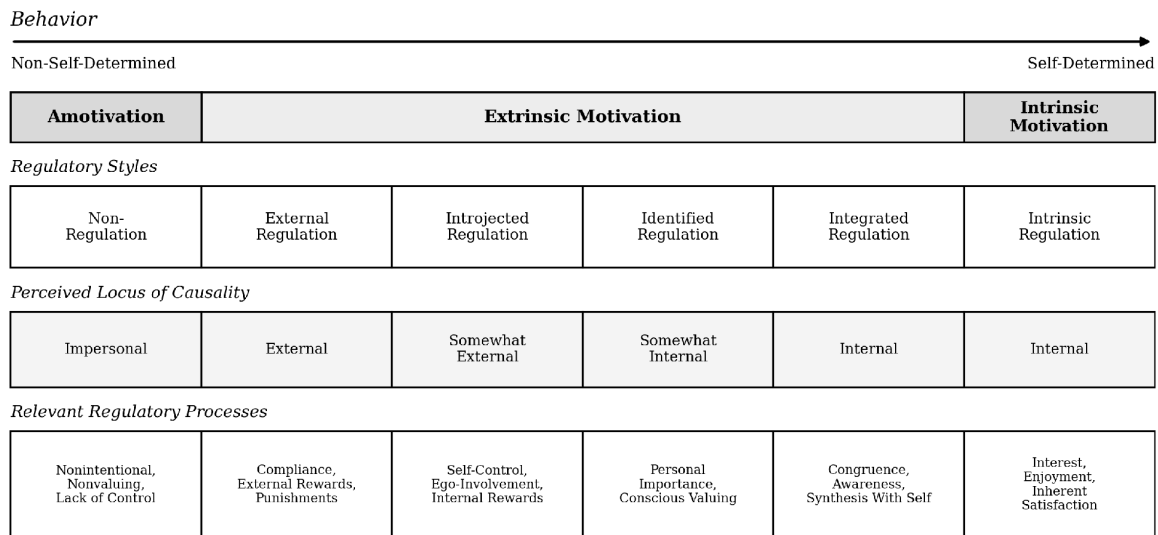
A Comment on Extrinsic Motivation

Although this essay centers on intrinsic motivation, a brief discussion of extrinsic motivation is worthwhile here because the two are often mistaken for opposites, and because SDT treats them as points along one continuum. Extrinsic motivation does not always thwart autonomy: when a person accepts an externally motivated behavior as their own, it can produce outcomes just as positive as intrinsic motivation itself. This continuum has a few steps along the way. At the start is amotivation, which is simply having no intention to act at all. Then, among the forms of extrinsic motivation, the least self-determined is external regulation, where a person acts only for a reward or to avoid punishment. Next is introjected regulation, where a person acts out of guilt or to protect their ego but has not accepted the behavior as their own. After introjected regulation comes identified regulation, where a person values the behavior and sees it as important, even when it is not fun. The most self-determined is integrated regulation, where the behavior becomes part of who the person is (Ryan & Deci, 2000). The closer a student's motivation moves toward this end, the more it acts like intrinsic motivation.

Figure 1 illustrates this continuum, from amotivation at one end to intrinsic motivation at the other.

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Figure 1
The Self-Determination Continuum



Note. The continuum runs from amotivation on the left, through four increasingly self-determined forms of extrinsic motivation (external, introjected, identified, and integrated regulation), to intrinsic motivation on the right; movement toward the right reflects more self-determined behavior. Adapted from “Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being,” by R. M. Ryan and E. L. Deci, 2000, *American Psychologist*, 55(1), p. 72 (<https://doi.org/10.1037/0003-066X.55.1.68>). Copyright 2000 by the American Psychological Association.

Where a student falls on the continuum matters. Ryan and Deci (2000) found that the more students were externally regulated, the less interest and effort they put into their work. Introjected regulation led to more effort, but also to more anxiety and poorer coping with failure. Identified regulation was tied to more interest and enjoyment in school, and more self-determined motivation was also linked to better engagement and performance. This tells us that what matters is how much the student has made the motivation their own.

STAGE-ENVIRONMENT FIT THEORY

Stage-Environment Fit theory, as described by Eccles and Roeser (2009), holds that a student's motivation depends on how well their environment matches the needs they have at that stage of life. When the environment fits those needs, students stay motivated, but when it does not, motivation tends to drop. This can explain the trend mentioned earlier, in which students become less motivated in early adolescence, around ages 11 to 12.

Eccles and Roeser (2009) explain that early adolescence is when this environment fit tends to worsen. Students at this age need more autonomy, warmer relationships, and feedback that focuses on improving rather than competing. However, the typical middle school does the opposite. Students moving from elementary school to middle school experience classrooms that are less personal and more controlling, with a stronger focus on grades and ranking. This creates a mismatch between what students need and what the environment provides, which contributes to the drop in motivation at this age. That said, Eccles and Roeser argue that this decline is not inevitable, since it is caused by the environment, which can be changed.

Much of the environment operates at the classroom level, and three factors pointed out by Eccles and Roeser (2009) resonate with the SDT framework. First, the quality of the teacher-student relationship is one of the strongest predictors of how motivated a student is. Warm and caring teachers give students the support they need to take risks and keep trying, but during the transition to middle school these relationships often become distant, just when students need them most. Classrooms also tend to become more controlling and to offer fewer choices at this time, when autonomy is exactly what students at this age are seeking. Another key factor is whether a classroom focuses on mastery or on performance. Eccles and Roeser define mastery-focused classrooms as ones that reward learning and improvement, while performance-focused classrooms reward doing better than others, through things such as class rankings. Mastery-focused classrooms tend to keep students engaged, while performance-focused classrooms tend to lower motivation. Finally, the nature of work also matters: students stay more engaged when the work is meaningful and challenging, with adolescents reporting the most boredom when the work feels passive or irrelevant. Each of these factors maps onto one of SDT's three needs: warm teacher relationships support relatedness, offering real choices supports autonomy, and mastery-focused classrooms support competence.

Eccles and Roeser (2009) also expand beyond the classroom, highlighting that extracurricular and out-of-school activities can have a strong positive effect, particularly when students have caring adults, chances to build skills, and a positive peer group. This finding is useful for thinking about how to design a program or classroom environment that keeps students motivated. They also review evidence that students who faced a large mismatch in environment during the school transition showed a large decline in motivation, whereas schools that kept warm relationships, gave students autonomy, and offered meaningful challenges did not show the

usual decline. This ties the whole model back to Self-Determination Theory: a good stage-environment fit is ultimately about whether the environment meets those same needs.

SITUATED EXPECTANCY-VALUE THEORY

Situated Expectancy-Value Theory (SEVT) explains how a student decides whether a task is worth their effort. Eccles and Wigfield (2020) claim that the factors predicting whether a student will perform a task are their expectancy for success and the value they place on the task. Expectancy for success is how well the student believes they will do at something. Value is how much worth the student places on the task. Both factors need to be high: a student with low expectancy for success feels anxious and ends up avoiding the task, while a student with high expectancy but low value will simply do the task with no interest.

Eccles and Wigfield (2020) break the concept of value into four parts: intrinsic value, utility value, attainment value, and cost. Intrinsic value is how much a student enjoys a task. Utility value is how useful the task is for achieving their future goals. Attainment value is how much being good at the task matters to who they are. Cost is what the task takes away, such as effort, giving up other things, and stress.

Like the other theories, SEVT also helps explain the drop in motivation in early adolescence. Eccles and Wigfield (2020) explain that students' expectations and values drop as they get older, especially during the transition to middle school, but that this decline is shaped by their experiences with teachers, parents, and peers rather than being something that happens automatically. This is the "situated" part of the theory: the word adds the factor of the environment shaping these values and expectations.

One difficult part of value for students is utility value, the sense that a task will be useful in the future. This asks young students to care about a future that seems—to them—very distant. In their Temporal Self-Regulation Theory, Hall and Fong (2007) describe this challenge: people tend to discount the future, meaning they perceive rewards that are far away as less valuable than rewards available right now. As a result, to them a long-term payoff such as "this will help you when you are an adult" feels less compelling than something that feels good in the moment. Consistent with this idea, McCue et al. (2019) found that adolescents who felt more connected to their future selves and could picture the future more vividly discounted the future less, placing more weight on the future in their decision-making.

This raises the question of whether adolescents can actually be prompted to feel more connected to their future selves. Burns et al. (2022) found that prompting adolescents and adults to think about their future selves, by imagining specific personal future events, made them more likely to delay gratification. Unlike McCue et al.'s (2019) correlational finding, Burns et al.'s result comes from directly prompting the imagining exercise,

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showing that this connection to the future self can be deliberately built and not just observed. Together, these studies suggest that utility value motivates a student when the future they envision feels real to them. Simply telling a student that a task “will matter” does very little, but helping them picture their future self more clearly can make that value motivating.

In short, SEVT shows that students engage only when they expect to succeed, value the task, and do not see its cost as too high.

PRACTICAL IMPLICATIONS

The three theories above point to autonomy, competence, relatedness, stage-environment fit, and value versus cost as major contributors to student motivation. Drawing on these theories, this paper will now present practical, actionable ideas for what teachers can do to motivate students.

AUTONOMY

Ryan and Deci (2000) claim that autonomy grows when students are given a choice and a reason for what they are doing, and shrinks when students are controlled through deadlines, rewards, and surveillance. Providing a clear, stated reason for an otherwise uninteresting task helps a student internalize it and accept it as their own, moving that student’s motivation toward the more self-determined end of the self-determination continuum discussed above. Patall et al. (2008) performed a meta-analysis on this idea: reviewing 41 studies, they found that choice raised students’ intrinsic motivation, effort, and performance, but that how much it helped depended on how the choice was presented. Choice worked best when students received two to four choices in a row—not just one, and not more than five. The effect on intrinsic motivation was also strongest when no separate reward was attached; when students were given an external reward on top of the choice, the benefit to intrinsic motivation nearly disappeared. One surprising finding is that choices which had nothing to do with the assignment content—such as what color to write in or in what order to do problems—actually raised motivation more than choices between different topics. Most importantly, the research shows the effect of choice on intrinsic motivation to be almost twice as large for children as for adults.

Reeve and Jang (2006) looked into 21 different behaviors hypothesized to be either autonomy-supportive or controlling: 11 autonomy-supportive and 10 controlling. In their study, preservice teachers taught a partner a puzzle task, and the researchers checked which of the 21 behaviors made the learner feel more autonomous. Listening to the student helped, as did letting the student work and talk in their own way, offering encouragement, offering hints instead of answers, and acknowledging how the student felt about the task. Praise that named specific improvements helped more than generic praise such as “good job.” In

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contrast, some behaviors made students feel less autonomous. Holding onto the materials instead of letting the student handle them hurt, as did giving away the answer before the student could try, issuing direct commands, using “should” and “have to” language, and asking questions that were really commands in disguise (“why don’t you just...”). Of these, three behaviors stood out as the strongest supports—encouragement, letting the student work independently, and letting the student talk—while two stood out as the strongest thwarts—controlling questions and “should” statements. Teachers do not need to give up control of the classroom to support autonomy: a few real choices with no reward attached, a one-sentence reason for the task, and simply choosing to listen rather than control are small changes with a measurable effect.

COMPETENCE

As noted earlier, Leversen et al. (2012) found competence to be the strongest predictor of well-being among the three needs, which makes how teachers build it especially important. Hattie and Timperley (2007) reviewed what builds competence through feedback. They found that feedback was one of the most powerful influences on learning ever measured, but that its effect ranged from strongly positive to actively harmful, depending on how it is given. Effective feedback, they argue, answers three questions: where a student is going, how they are doing, and what to do next. Feedback can be aimed at four different levels: the task itself, the strategy or process used, the student’s own self-regulation, or the student as a person. Feedback about the task itself—such as marking an answer right or wrong—is powerful on its own but does not transfer well to other problems. Feedback on strategy and self-regulation—such as pointing out one specific thing to try next—works better for deep learning. Feedback aimed at the student personally—such as calling them smart—is the least effective type of all. In fact, combining praise with task feedback, as in “good job, that’s correct,” distracts from the useful part of the comment and makes it less effective than task feedback given on its own. Feedback delivered as written comments explaining what improved and what to try next is more effective for learning than a grade alone, and adding a grade on top of a comment does not make the comment more useful. In practice, this suggests one simple substitution: swap “good job” for a specific note on what got better and one next step to try, and be careful with praise aimed at the student rather than the work.

RELATEDNESS

Ryan and Deci (2000) describe relatedness as a need that works in the background: students explore and stay more curious when they feel connected to or cared for by an adult. Duong et al. (2019) tested a low-cost way to build these relationships. Their study was conducted at a public middle school with 20 teachers and 190 students. The teachers, along with their classes, were randomly split between a training group and a control group. The training is called Establish–Maintain–Restore (EMR), and it teaches teachers three practices in a single three-hour session. To establish a relationship, teachers hold brief, individual check-ins with each student.

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To maintain it, they aim for five positive interactions with a student for every negative one. To restore it after conflict, they have a short, private conversation, using a move like the teacher taking ownership of their part in the problem or validating the student's feelings. Three months later, trained teachers had significantly better relationships with their students, more engaged class time, and less disruptive behavior than the control group. These were substantial improvements from a single three-hour training session. Building relatedness does not require an extended course or extra class time; all that is needed is a specific plan for how to relate to students day to day.

MASTERY CLIMATE

As noted earlier, Eccles and Roeser (2009) contrast mastery-focused classrooms, which reward improvement and understanding, with performance-focused classrooms, which reward grades, rankings, and outperforming others. Mastery-focused classrooms sustain motivation better, particularly for struggling students, because comparing grades or ability in public creates the risk of trying and failing in front of others. This links to the idea of cost in Eccles and Wigfield's (2020) SEVT: public comparison is one way a student can lose interest in a subject while still valuing it. The same idea explains boredom, since passive or repetitive work gives students little chance to feel capable or interested—the same mismatch between environment and need described earlier, but expressed as boredom rather than anxiety. Grading on improvement instead of rank, avoiding public comparisons between students, treating mistakes as a normal part of learning rather than something embarrassing, and keeping work challenging but meaningful are all ways to lower cost and keep students motivated.

VALUE

Eccles and Wigfield (2020) argue that a task only motivates a student once its value is clear. One part of value, utility value, depends on a future that feels real and specific. Shin et al. (2019) tested a way to build utility value in fifth and sixth graders. Over the course of a semester, students learned about real jobs and then wrote to younger students explaining how a school subject helped in those jobs. Each note included a personal example (how the subject helps that worker) and a communal example (how it helps other people). Students who wrote these notes showed increased personal utility value, increased communal value, and a stronger will to keep doing science-related activities. A comparison group, which completed the same career-education activities without the utility-value content, showed scores that dropped on these same measures over the same period. Interest in science rose—indirectly—in the experimental group, through the rise in utility value rather than the writing itself, and the intervention did not change students' test scores at all. A short, repeated writing task that connects schoolwork to a specific, real use for someone the student can picture is one way to build utility value; the

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evidence suggests it works by changing how useful a subject feels, rather than by boosting interest or grades directly.

Table 1

Do's and Don'ts From the Practical Implications

	<i>Do's</i>	<i>Don'ts</i>
Autonomy	Offer two to four real choices in a row and give a one-sentence reason for a required task; support autonomy by listening to the student, letting them work and talk independently, and offering encouragement or hints instead of the answer.	Attach a reward to the choice, give commands or "should" statements, or use controlling moves such as holding onto materials or giving away the answer before the student can try.
Competence	Give a specific note on what improved and what to do next.	Give a grade alone, or personal praise such as "you're smart."
Relatedness	Use brief individual check-ins; aim for five positive interactions per negative one.	Let a conflict go until the relationship repairs itself.
Mastery Climate	Grade on improvement and treat mistakes as normal.	Rank students publicly or compare grades in front of them.
Value	Have students write about a specific, real use of a topic for a person or job.	Rely on a vague "this will matter later" statement.

Note. The table summarizes the practical recommendations discussed in the Practical Implications section and the source behind each: Patall et al. (2008) and Reeve and Jang (2006) for autonomy, Hattie and Timperley (2007) for competence, Duong et al. (2019) for relatedness, Eccles and Roeser (2009) for mastery climate, and Shin et al. (2019) for value. Created by the author.

CONCLUSION

An adolescent's motivation in the classroom is not static. It depends on whether the environment meets the three basic needs stated by Self-Determination Theory (Ryan & Deci, 2000)—autonomy, competence, and relatedness. Stage-Environment Fit explains why early adolescence, namely the transition to middle school around ages 11 to 12, is when these needs are most often thwarted, causing a drop in motivation (Eccles & Roeser, 2009). Situated Expectancy-Value Theory adds other factors, including whether a task feels valuable and

worth its cost, and explains why the sense of value drops during that same transition period (Eccles & Wigfield, 2020).

The Practical Implications section demonstrates how this mismatch can be addressed. Structured choice, specific task-focused feedback, brief personal check-ins, grading on improvement, and short writing tasks that connect schoolwork to real life each restore part of what the transition to middle school takes away. These are small additions to a classroom, and they do not require a teacher to rebuild the class from scratch.

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