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Original Manuscript

Facilitating Student Outcomes by Supporting Autonomy: Implications for Practice and Policy

Policy Insights from the Behavioral and Brain Sciences
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Abstract

All students come to the classroom with inner motivational resources that, when supported, catalyze engagement, motivation, learning, and achievement. Teachers' support for student autonomy is an essential tool for enhancing desirable student outcomes; practitioners and policy-makers can promote autonomy-supportive classroom environments. An overview of autonomy support presents core, autonomy-supportive practices: (a) providing choice opportunities, (b) providing rationales, and (c) incorporating student perspectives. Next, we address common misconceptions about autonomy support and consider why practitioners often do not adopt an autonomy-supportive approach. Finally, autonomy support might help to address broader societal challenges, with strategic implications for researchers, educators, and policy-makers.

Keywords

motivation, autonomy support, teacher practice, education policy, learning

Tweet

To improve desirable student outcomes and address developmental declines in student motivation, we must create autonomy-supportive classroom environments.

Key Points

- Educators and students alike often lament lack of motivation as a key obstacle to learning.
- Tapping into people's innate psychological need for autonomy (i.e., feeling that actions emanate from the self) enhances motivation.
- Students and teachers benefit when teachers create a comprehensive, autonomy-supportive climate by mastering core practices (e.g., providing choices, providing rationales, and taking seriously students' perspectives).
- Various factors discourage autonomy support or lead teachers to be controlling in the classroom, to the detriment of students' outcomes.
- Autonomy support might address broader societal challenges, including declining motivation during adolescence, gender disparities in science, technology, engineering, and mathematics (STEM), and academic inequities across race and income groups.
- School administrators and policy-makers should consider motivation and autonomy support when deciding school policies and educational reform.

Introduction

Students come to the classroom equipped with motivational resources, naturally seeking opportunities to explore their personal interests, develop competence, and connect with other people (e.g., Reeve, 2009). Ideally, classroom practices tap into these existing, internal resources and catalyze them. But, all too often, classroom practices unintentionally thwart these motivational resources. Indeed, educators and students alike often lament on a lack of motivation (or a lack of the right kinds of motivation) as a key obstacle to learning and instruction. So, how can teachers create a classroom environment that will support engagement and catalyze those motivational resources? Teachers' support for student autonomy is an essential tool for developing students' motivation, engagement, learning, and achievement.

Autonomy Support and Its Components

Autonomy support is a personal interaction style in which one person (e.g., a teacher) attempts to take the perspective

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of another (e.g., a student), considering their thoughts, values, and perspectives to guide behavior. Essentially, it attempts to enhance another's personal endorsement of a behavior ("owning it"), encouraging their subjective experience of having volition. Autonomy support puts into practice the robust evidence-based tenet of self-determination theory (SDT; Ryan & Deci, 2017; a macro theory of human motivation), namely that people have an innate psychological need for *autonomy*, that is, a need to feel that actions emanate from the self. Moreover, this need underlies optimal psychological functioning, growth, and productivity, along with other needs for competence and relatedness. This interpersonal support acknowledges that people thrive (i.e., students experience greater classroom engagement and learning and fewer undesirable outcomes like anxiety, poor learning strategies, or school dropout) when their motivation to engage in a behavior is *autonomous* rather than *controlled* (e.g., Ryan & Connell, 1989; Taylor et al., 2014). Thus, autonomy support recognizes that students develop best when their behavior is volitional and its underlying reasons feel fully self-congruent and guided by their own interests, values, and goals. Feeling pressured to act in certain ways due to external (e.g., rewards, punishment) or internal (e.g., feelings of obligation, guilt, or pride) constraints that do not feel self-congruent is suboptimal.

In the classroom, autonomy support centers on structuring activities and communicating in ways that allow students to feel engaged in learning because it reflects their own values, preferences, interests, and goals. Overall, an autonomy-supportive teaching style entails curiosity, openness, and empathic understanding, which allows learners to feel that they can be themselves with their teacher (Soenens & Vansteenkiste, 2005). Students of all ages and ability and from various cultures and contexts benefit when their teachers support autonomy. Teacher autonomy support predicts greater need satisfaction and autonomous motivation in school (e.g., Cheon, Reeve, & Moon, 2012; Deci, Hodges, Pierson, & Tomassone, 1992; Jang, Kim, & Reeve, 2012), greater classroom engagement (behavioral and emotional), and self-regulation for learning (e.g., Assor, Kaplan, & Roth, 2002; Hagger, Sultan, Hardcastle, & Chatzisarantis, 2015; Jang et al., 2012; Patall, Steingut, Vasquez, et al., 2018; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004), greater self-esteem, vitality, life satisfaction, and well-being (e.g., Ferguson, Kasser, & Jahng, 2011), and academic achievement (e.g., Patall, Cooper, & Wynn, 2010; Soenens & Vansteenkiste, 2005; Vansteenkiste et al., 2004).

Any practice that enhances another's experience of endorsing their own behavior and having volition may be conceptualized as "autonomy supportive." However, several components have emerged as key to an autonomy-supportive teaching style. These include (a) the provision of choice and student input, (b) explanations or rationales of the personal relevance of learning, (c) being open to and attuned to students' perspectives, (d) accepting rather than the suppressing students' negative affect and resistance, (e) using language to invite and inform, instead of control, and (f) eliciting and incorporating students' curiosity and interest in the learning content.[1] As the next section shows, the strength of a comprehensively autonomy-supportive climate is greater than a simple sum of its components (e.g., Deci, Eghrari, Patrick, & Leone, 1994; Patall, Dent, Oyer, & Wynn, 2013; Patall, Vasquez, Steingut, Trimble, & Pituch, 2017).

Providing Choice Opportunities

Overall, extensive experimental, correlational, and meta-analytic evidence shows the benefits of providing choices and decision-making opportunities in the classroom (e.g., choices about actions, assignments, pacing, tasks, topics, methods, and classroom management, among other things). Choice opportunities enhance interest, enjoyment, effort, persistence, and performance (Mouratidis, Vansteenkiste, Sideridis, & Lens, 2011; Patall, Cooper, & Robinson, 2008; Patall et al., 2010).[AQ: 1]

However, giving choices can sometimes backfire. Choices given in a controlling manner or that fail to allow students to express their interests or regulate their behavior have limited benefits (e.g., Katz & Assor, 2007; Patall et al., 2008). Choosing can also backfire when students do not feel competent about the task or the choices they are asked to make (e.g., Patall, Sylvester, & Han, 2014). In such cases, students may prefer *trusted* teachers, peers, or parents choose for them, particularly if they come from a more collectivist cultural background (e.g., Bao & Lam, 2008). In sum, although providing choice is a critical component of supporting autonomy (e.g., Patall et al., 2017), both recipient and context must be carefully considered.

Providing Rationales

For students to experience autonomy in any activity, but especially an inherently uninteresting one, they have to understand its value. When teachers provide rationales for learning activities by communicating value, they can help students to internalize and endorse expected behaviors in the classroom (e.g., Jang, 2008; Reeve, Jang, Hardre, & Omura, 2002). However, not all rationales have benefits. Rationales most effectively support autonomy, motivation, engagement, and learning by taking the student's perspective: attempt specifically and concretely (rather than vaguely and abstractly) to highlight how activities relate to students' personal or prosocial goals, values, aspirations, and life experiences (e.g., Steingut, Patall, & Trimble, 2017; Vansteenkiste et al., 2004). Rationales that build on students' existing knowledge, but highlight value that may be hidden from the perspective of the student, yet known to teachers, are likely to be particularly effective (e.g., Vansteenkiste et al., 2018). In contrast, some rationales rely on external contingencies, social norms, and pressure, or only take the teachers' perspectives (and not

those of students) to justify the value of a behavior. These undermine autonomous motivation, engagement, and learning—students feel controlled and disconnected (e.g., Steingut et al., 2017; Vansteenkiste et al., 2004).

Incorporating Student Perspectives

At the core of an autonomy-supportive approach to teaching is teachers' active effort to take students' perspectives in all interactions and to assume that those perspectives are valid considerations in the learning environment. Offering choices and providing rationales require this perspective-taking to be successful motivational strategies.

Other strategies even more clearly revolve around this key goal for teachers to seek out, engage with, acknowedge, validate, and incorporate students' perspectives in their instruction. Teachers who rely on informational, nonevaluative, noncontrolling language communicate that they care about students' perspectives and their autonomy in the classroom and, in turn, support students' autonomous motivation, engagement, and learning (e.g., Koestner, Ryan, Bernieri, & Holt, 1984). Using words like "could," "might," or "consider," offering hints and suggestions, providing encouragement, expressing acceptance and support in response to student opinions, and being responsive to student questions are all autonomy-supportive forms of communication. These contrast with more controlling forms of communication that include rigid commands and directives that verbally push students to behave in predetermined teacher-sanctioned ways, including words like "should," "must," "do," "stop"; this leaves students feeling pressured and judged, ultimately undermining autonomous motivation and learning (Assor, Kaplan, Kanat-Maymon, & Roth, 2005).

Along similar lines, teachers who leave space in the classroom to hear, understand, accept, and respond to students' questions, opinions, criticism, and negative feelings, rather than redirect or suppress such perspectives, ensure that students feel respected and motivated (e.g., Assor et al., 2002; Deci et al., 1994; Patall et al., 2013). Likewise, teachers who build lessons around students' interests or preferences (e.g., Jang, Reeve, & Halusic, 2016; Patall, Steingut, Vasquez, et al., 2018) or allow students to personalize their learning activities (e.g., Cordova & Lepper, 1996) nurture students' autonomy and promote greater engagement and learning. Essentially, when teachers demonstrate that they understand students' perspectives and are collaborating with students to transform the value of classroom activities based on students' input, students are more likely to internalize the value of those activities and engage.

Autonomy Support Interventions

Education researchers have begun to design and test theory-based interventions intended to train teachers to support their students' autonomy more. The interventions (e.g., Aelterman, Vansteenkiste, Van den Berghe, De Meyer, & Haerens, 2014; Cheon et al., 2012; Tessier, Sarrazin, & Ntoumanis, 2010; see also Su & Reeve, 2011) typically take a workshop format (1-6 hours over 1-2 days) to expose teachers to the concept of autonomy-supportive teaching and its components (in contrast to controlling teaching and its components). Multimedia rich presentations (e.g., video examples) and interactive activities allow for analysis, discussion, practice, and coaching; they encourage teachers to plan their autonomy support. Many interventions also include a booster workshop session to review material and discuss successes, tips, and challenges.

Teachers who are trained (even in relatively short interventions) are more effective at supporting autonomy in the classroom (Su & Reeve, 2011). When their teachers receive this training, students benefit educationally and psychosocially (e.g., gain in autonomous motivation, classroom engagement, learning, academic achievement, and well-being) (e.g., Cheon et al., 2012; Flunger, Mayer, & Umbach, 2019; Reeve, Jang, Carrell, Jeon, & Barch, 2004). Moreover, teachers themselves also benefit from training; they experience a boost in need satisfaction and efficacy for teaching, as they realize such strategies are feasible, easy to implement, and beneficial to their students' learning and their relationships with students (e.g., Cheon, Reeve, Lee, & Lee, 2018; Reeve & Cheon, 2016).

However, limitations do arise. First, although many interventions across the world exist, few training interventions have targeted autonomy support for U.S. teachers and students (Reeve et al., 2004, developed an intervention for Midwestern high school teachers and students). Second, with few exceptions (e.g., Flunger et al., 2019; Reeve et al., 2004), fully developed teacher training interventions have focused heavily on physical education teachers and sports education contexts and have neglected training programs for academic content teachers. Third, current barriers may prevent wide-scale accessibility and implementation of existing interventions. Challenges include a lack of accessible manuals for effective autonomy support training, the current reliance on autonomy-support scholars to guide intervention trainings, and the resource-intense nature of autonomy support trainings in terms of time, staff, and money. As education leaders and researchers think about scaling up the autonomy-support intervention trainings, these will be challenges.

Do Teachers Support Autonomy in the Classroom?

Given the evidence that autonomy support benefits students, teachers might readily adopt this approach in their instruction. However, student and observer reports suggest that, on average, teachers are indifferent or controlling in their practice (e.g., Reeve, 2009). Unfortunately, even with the best

intentions to promote students' learning, some teachers adopt controlling practices and pressure students to think, act, or feel in particular ways (i.e., through the use of commands, directives, incentives, rewards, punishments, deadlines, and suppression), without much consideration for students' perspectives; these practices inadvertently *thwart* students' psychological needs, autonomous motivation, well-being, and academic performance, as well as promote disengagement and amotivation (e.g., Assor et al., 2005; Assor et al., 2002; Patall, Steingut, Vasquez, et al., 2018). Even in the absence of overtly controlling teacher practices, neglecting to support autonomy has undesirable consequences for students' need satisfaction, engagement, and academic performance (e.g., Cheon et al., 2019).

Teachers undoubtedly want their students to learn and thrive in the classroom. So, why ignore or thwart students' autonomy in their classrooms? One reason may simply reflect confusion regarding the nature of autonomy support versus chaos and the nature of structure versus control (e.g., Aelterman et al., 2019; Reeve, 2009). Sometimes, in an attempt to avoid chaos, teachers fail to provide autonomy support. The critical distinction is that, in contrast to autonomy support, teachers in chaotic classrooms abandon students, providing no direction and leaving them to fend for themselves, or adopt a laissez-faire attitude in which they merely respond to students' initiatives. Like autonomy support, chaos could be considered "student directed" and low in teacher directives. However, unlike autonomy support, chaos lacks necessary supports for motivation and learning; chaos does not include teachers' attempts to create a participative climate and attune to students' needs through perspective-taking, communication, and learning activities that align with student perspectives.

In a classroom with high structure (i.e., an environment that will help students develop and experience competence), teachers provide guidance in the form of clear expectations, procedures, and feedback that builds on students' needs and skills. Autonomy support and structure (along with teacher warmth or relatedness; Roorda, Koomen, Spilt, & Oort, 2011) both support autonomy in an optimally motivating classroom; structure and autonomy support often correlate or bolster each other's effects (e.g., Aelterman et al., 2019; Jang, Reeve, & Deci, 2010; Vansteenkiste et al., 2012).

Sometimes, structure can be confused with the less adaptive practices that define control and end up being antithetical to autonomy support. Like structure, control provides students with direction. But, unlike structure, control takes only the teachers' perspective into account and attempts to pressure students to behave, think, and feel in only teacher-prescribed ways. Thus, even when teachers have the best intentions to help students thrive, autonomy support can easily shift to chaos and structure to control, in the absence of the teacher's active attempts to understand student perspectives and scaffold students' instructional experiences based on those perspectives. Teachers should note the critical distinctions across motivational approaches—empowering them to support autonomy and structure and to avoid chaos and control.

Teachers may also adopt controlling practices in the classroom due to pressures from above, from below, and from within (see Pelletier, Seguin-Levesque, & Legault, 2002; Reeve, 2009, for a discussion). Pressures from above include teachers (a) inherently occupying a powerful social role, relative to students, that implies their use of control; (b) being socialized within a U.S. culture that equates teacher control over students with teacher competence; and (c) themselves experiencing contextual pressure and control from schools, administrators, parents, and students who hold them accountable for students' outcomes.

Pressures from within include some teachers, who (a) believe that controlling strategies like rewards and threats are most effective; (b) have personality dispositions that lead them to teach in a controlling manner; or (c) are not intrinsically motivated to teach and, in turn, teach in a controlling manner. Finally, pressures from below include teachers using control strategies in response to students' passivity and disengagement, as an efficient way to garner student action.

A key takeaway: for teachers to support students' autonomy, they need support for their own autonomy (as well as support for their competence and relatedness). This support can come from teacher peers and local school administrators, as well as from city, state, and national government officials who create education policies that have implications for teachers' practice. Support can come from students who must take partial responsibility for creating a motivating classroom environment by *agentically* engaging and letting teachers know how to support student needs (Reeve, 2013). Finally, support can come from theory-driven education about the nature of motivation support in postsecondary schools of education and professional development led by motivation experts.

Pressing Societal Challenges That Autonomy Support Can Help Address

Autonomy support can potentially contribute to addressing seemingly intractable education problems that have plagued American schools for decades. A distressing pattern consistently found in education research is that student motivation and engagement in school decline across development, particularly during transitions to middle school and high school (e.g., Lepper, Corpus, & Iyengar, 2005). About 30% to 60% of secondary students are disengaged from school (National Research Council and Institute of Medicine, 2004). While explanations for this decline are many, the problem probably lies in the school environment: a lack of fit between students' motivational needs and teaching practices (e.g., Eccles et al., 1993). Normative classroom instructional practices in

middle and high schools are largely ill-suited to adolescents' increased demand for autonomy and interpersonal connections, with secondary school teachers providing fewer opportunities for decision-making, fostering fewer personal connections, and emphasizing more competition and controlling practices, compared with elementary school teachers. Given this evidence, promoting teachers' autonomy support in middle and high school may potentially prevent these declines. In fact, in line with developmental theories that highlight autonomy as a critical milestone during adolescence (e.g., Zimmer-Gembeck & Collins, 2003), autonomy support has stronger benefits during adolescence, particularly during middle school (e.g., Katz, Kaplan, & Gueta, 2009).

Engaging girls in science, technology, engineering, and mathematics (STEM) classes is another critical challenge for educators, particularly in physics, engineering, and computer sciences, where gender disparities in college majors and careers are most pronounced (National Science Foundation, 2017). Current reform efforts have primarily focused on increasing girls' STEM opportunities, achievement, and exposure to advanced curriculums. However, such efforts alone are unlikely to be sufficient, as research suggests that girls' classroom experiences and motivational beliefs during high school play a critical role in predicting whether they persist in STEM fields into college and for their careers (e.g., Wang & Degol, 2017). Along these lines, recent research (Patall, Steingut, Freeman, Pituch, & Vasquez, 2018) has suggested that urban high school girls perceived their teachers to provide less daily autonomy support and experienced less daily need satisfaction than boys in their physical science classes. In turn, this discrepancy in daily experiences explained girls' lower engagement in physical science classes relative to boys. Consistent with a long line of research noting pervasive negative stereotypes about girls' suitability for physical and engineering science fields (e.g., Leslie, Cimpian, Meyer, & Freeland, 2015) and corresponding differences in teachers' instructional practices in science and math depending on students' gender (e.g., Shumow & Schmidt, 2013), these findings highlight potential inequities in experiences of autonomy support and consequent motivation. Interventions intended to promote women's representation in STEM should include professional development for science teachers regarding the effective use of autonomy support to boost motivation and engagement, particularly for female students.

Finally, persistent racial and income disparities in measures of academic success (e.g., McDonough, 2015; Reardon, 2013) remain a pressing concern in American education. Black, Latinx, and low-income students lack access to an array of high-quality teacher inputs, including highly qualified and credentialed teachers who improve student achievement (e.g., Goldhaber, Lavery, & Theobald, 2015). These students are disproportionately subjected to mistreatment in the form of teachers' low expectations of them (e.g., Harber et al., 2012) and harsh, discriminatory, disciplinary action (e.g., Gregory, Skiba, & Noguera, 2010). Along these lines, low-income students and students of color experience less positively motivational school contexts relative to their higher-income and White peers, particularly as they enter adolescence. This includes instruction that is less well-suited to supporting motivation, poorer quality student–teacher relationships, poorer quality feedback, as well as experiences and expectations of mistrust and unfair treatment by their teachers (e.g., Solomon, Battistich, & Hom, 1996; Yeager et al., 2014). In contrast, teachers' motivationally supportive instruction promoting students' autonomy, competence, and connectedness may serve a protective role and particularly matter for the engagement and success of students of color (e.g., Roorda et al., 2011; Tucker et al., 2002; Yeager et al., 2014).

Although broad systemic approaches (i.e., to reduce racism and discrimination) need to address these disparities, teachers who sincerely try attending to the psychological needs of students of color and low-income students will be taking critical steps toward reducing such disparities. Moreover, adopting an autonomy-supportive orientation to instruction is well-aligned with many recommendations about culturally responsive teaching (e.g., Aronson & Laughter, 2016). This perspective encourages teachers to use "the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them" (Gay, 2010, p. 31). Much like autonomy-supportive teaching, culturally responsive teaching benefits ethnically diverse students' academic motivation, interest in content, perceived competence, and learning (Aronson & Laughter, 2016). From an autonomy-supportive perspective, culturally responsive teaching is likely effective because it allows teachers to tap into students' need to feel autonomous, specifically to experience their behavior as reflective of their cultural backgrounds, experiences, and values, as well as their personal interests, preferences, and goals. From a culturally responsive teaching perspective, teachers should sincerely seek to understand and incorporate students' culturally specific perspectives that shape their experience of instruction, in the effort to support students' autonomy and motivation.

Policy Insights for Researchers, Teachers, and Policy-Makers

Research on motivation has provided abundant evidence that students benefit when their teachers support autonomy and suffer when their teachers are indifferent to their autonomy—or worse, are controlling. Programs to help teachers understand the benefits of autonomy support and adopt more autonomy support in their practice have begun to emerge in recent years. However, much work remains for motivation researchers on this front. Fully

developed, manualized, and scalable autonomy-support training programs need to be made readily accessible to schools and teachers. Moreover, researchers need to put greater thought and effort into creating interventions that are tailored to target populations who might benefit most from improved motivational classroom climates, populations including students of color, low-income students, and girls specifically in STEM education.

To teachers, the call to action might be obvious. Teachers may find it rewarding to explore ways to implement autonomy support in their everyday practice, even in the face of pressures that sometimes conflict with the goal to support students' psychological needs. By becoming aware of the undesirable effects of controlling practices on students' outcomes and the desirable effects that autonomy-supportive practices have, teachers may feel ready to try more autonomy-supportive practices. Greater awareness of the pressures to be controlling may help balance such demands with long-term goals to support students' autonomy and motivation.

Finally, school administrators and policy-makers could work closely with motivation scholars when making school policies and educational reform decisions. While aspects of current policy (i.e., Next Generation Science Standards [NGSS] and Common Core) and school or district-wide reform initiatives (e.g., widespread adoption of social emotional learning programs and mind-set interventions) may demonstrate progress toward encouraging practices that support students' psychological needs for autonomy, competence, and relatedness, the long-standing emphasis on high stakes testing and accountability actively discourages teachers' autonomy support and diminishes students' motivation for learning more generally (e.g., Ullucci & Spencer, 2008). Policy-makers and administrators can create the broader context of policy that will lead teachers to feel supported in their own needs for autonomy, competence, and relatedness, so in turn, they are prepared to support the needs of their students.

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Supplemental Material

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Note

1. Table 1 describes these practices and can be found in supplementary online material.

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