



(Kostas, 2017)

ABSTRACT

The global pandemic and sudden lack of face-to-face contact between teachers and students has accelerated interest in social-emotional learning (SEL). With greater numbers of people thinking about SEL, more confusion has emerged: How should we conceptualize SEL? Which constructs should be included? We propose a conceptualization of SEL that is anchored in the fundamental psychological needs of students. First, we describe these psychological needs—social connectedness, motivation, and self-regulation—that are prerequisites for optimizing student outcomes. Then, we outline several benefits that we hope this conceptualization offers to researchers and practitioners: clarity with respect to what SEL is and is not, an evaluative tool to help schools select SEL models and curricula, and practical guidance for educators helping students.

KEYWORDS

Motivation; relationships; self-regulation; social connectedness; social emotional learning

The effort to infuse social emotional learning (SEL) into the core fiber of schools faces a unique historical moment. On the one hand, the global pandemic and ensuing school closures have escalated appreciation for the importance of SEL. Scores of parents gained first-hand experience of how critical social bonds are for their children, how challenging it is to motivate them, what happens when they fail to self-regulate, and many other hard-earned lessons. For example, parents may wonder how to encourage social perspective-taking between siblings, which kinds of goals support more enduring motivation, and how to foster the children’s ability to keep themselves on-task. On the other hand, this increased appreciation and attention to SEL has led to confusion around what this construct is and is not. With more parties interested in SEL, ideas proliferate about what specific constructs fall within its umbrella and which ones educators should prioritize.

Although an abundance of SEL definitions, constructs, and curricula confers some benefits, increasingly problems arise. Practitioners face a challenging task of sifting through increasing numbers of models for SEL to identify the right fit for their particular schools. The Collaborative for Academic, Social, and Emotional Learning (CASEL), Transforming Education, The Aspen Institute,

European Commission Network of Experts on Social Aspects of Education and Training (NESET), and many others each advance their own model for thinking about what SEL is, what constructs are most important, and which might be important to prioritize in different settings. Distinct curricula are often developed based on these different models. It is hard to imagine that school leaders find themselves endowed with sufficient time to thoughtfully parse all these options and select the right model and corresponding curriculum for their school.

Researchers face a related problem around the dilution of knowledge. As scholars try to study different SEL constructs and evaluate the efficacy of SEL curricula, the proliferation of approaches reduces the attention any one construct or model might receive from scholars. Scholars examining essentially the same phenomena may use different measures that emerge out of competing traditions. For example, while Jones et al. (2011) describe “prosocial fantasies,” Grossman et al. (1997) discuss “peer social skills,” and Levesque et al. (2016) examine “healthy relationship skills.” Similarly, Bauer et al. (2007), Jones et al. (2011), and Herrera et al. (2007) refer to bullying, aggression or conduct problems, and disruptive behavior, respectively. When researchers use slightly different measures to assess constructs that are nearly identical, it makes it particularly challenging for those trying to aggregate knowledge about the impact of SEL programs (e.g., Durlak et al., 2011).

As a final example, consider the challenges faced by policymakers in a world of heterogeneous understandings of SEL. How can they adjudicate which policies to advocate for if their constituents understand key constructs to mean different things or all want to prioritize different models from different organizations? In 2019, a prominent American education-policy blog hosted a series of guest writers to discuss SEL. The authors described SEL in terms of character education, civics education, moral development, safety, therapy, whole child and so forth (Greene, 2019; Hess, 2019; Pondiscio, 2019)—making it all but impossible to develop policies for SEL that might satisfy such a broad array of different constituent perspectives.

A Conceptualization of the Core, Fundamental Elements of SEL

We argue for a conceptualization of SEL that addresses the aforementioned challenges by proposing a common, distilled understanding of SEL. Rather than add to the plethora of existing models of SEL, we propose a conceptualization that identifies foundational elements that need to underlie an SEL model or curriculum for it to be effective. Specifically, we identify three fundamental psychological needs of students¹—core needs that apply to everyone regardless of race, nationality, and culture: *social connectedness*, *motivation*, and *self-regulation*. In other words, for optimal student outcomes to occur, we hypothesize that students must feel a social bond with their teacher and (at least some) peers, they must be motivated to engage in learning tasks, and they must sufficiently self-regulate to remain motivated to pursue these tasks.

These fundamental needs appear regularly within a number of “grand” theories of human functioning and achievement. For example, Ford and Smith’s (2007) theory of “optimal human functioning” includes key roles for motivation, emotions and self-regulation as contributing to the ultimate aim of thriving with social purpose. Ryan and Deci’s (2017) self-determination theory emphasizes belongingness as a key end towards which we are all intrinsically motivated. Snow’s theory of aptitudes (Corno et al., 2002; Snow, 1996; Snow et al., 1996) describes affective and “conative” (i.e., self-regulatory) factors as helping students remain committed to their goals within achievement contexts. Thus, although the nomenclature and specifics vary, so many empirically-supported theories consistently highlight social, motivational, and self-regulatory factors as key ingredients for human functioning that we view them as fundamental.

In the next section, we describe these psychological needs and illustrate each domain with prototypical constructs. Tables 1, 2, and 3 in the appendix add examples of key literature for each construct within the three domains. Both the constructs and the literature represent illustrative, but not exhaustive, lists.

Social Connectedness

Growing evidence underscores the importance of social relationships for human functioning. Many scientists hypothesize that our brains evolved expressly to connect with others (Lieberman, 2013), and that our social relationships are inextricably linked to our health and longevity (Yang et al., 2016). This extra gray matter can pay big dividends in schools.

However, before students can benefit from social relationships, they need to develop skills and adopt behaviors that will facilitate their social connections to others. For instance, greater social perspective taking capacities (Gehlbach, 2017), negotiation and conflict resolution skills (Deutsch & Coleman, 2000), and engagement in prosocial behavior (Wentzel & Caldwell, 1997) will pave the way for healthy relationships. In turn, learners who are better socially connected to their classmates (Wentzel et al., 2020) and teachers (Brinkworth et al., 2018; Robinson et al., 2019; Roorda et al., 2011) achieve better than their less well-connected peers. Likewise, students whose families have stronger relationships with the school tend to experience better outcomes (Epstein, 2010). Beyond specific relationships, more holistic social constructs can be major influences on a student's well-being at school. For instance, the extent to which a school's culture provides a good fit for all their students' cultural backgrounds (Gay, 2018) affects students' overall sense of belonging (Osterman, 2000), and their perceptions of the classroom or school climate (Freiberg, 1999).

Motivation

Of course, strong social connectedness, does not, by itself, ensure learning—motivation is equally important. One can easily imagine students who are well-adjusted socially (and equally well-regulated) but who do not engage in academic tasks or strive towards school-relevant goals. Thus, motivation serves as a second fundamental psychological need for optimizing student outcomes. Like social connectedness, ample research suggests a connection between motivation and a host of positive academic outcomes (Eccles et al., 1993; Wigfield et al., 2009).

Within the subfield of motivation numerous theories compete: Expectancy-value theory (Wigfield & Eccles, 2000), goal theory (Pintrich, 2000), self-determination theory (Ryan & Deci, 2017), and others. However, several constructs are, in some form, reliably included in almost all the major theories.

First, for motivation to occur, behavior has to be directed towards some end—whether this end is described as a specific goal (Ford & Smith, 2007), a general type of goal (Elliot, 2006; Pintrich, 2000) or a larger purpose (Bronk et al., 2009). Next, there must be some confidence that the goal is attainable. In other words, students must have sufficient self-efficacy or expectations that they can succeed if they are to direct effort towards the goal (Bandura, 1997; Usher & Pajares, 2008). Another key requirement for motivation to occur is the existence of some energizing force to propel the student to pursue the goal; emotions, interest and values can all serve this purpose depending upon the achievement context in question (Ford, 1992; Renninger & Hidi, 2011; Wigfield et al., 2009). Finally, a number of dispositions or propensities shape students' motivation. For instance, attributions students typically make to past achievement events (Weiner, 1994) help shape their future motivation, for example whether they tend to adopt a fixed or growth mindset (Dweck, 2008). Likewise, some people may do better than others at assiduously persevering towards long-term goals (Duckworth & Gross, 2014). Thus, whether it arises intrinsically or is fostered by external factors—motivation is a necessary prerequisite for a wide array of student outcomes (Ryan & Deci, 2017).

Self-regulation

Self-regulation complements motivation by helping people adhere to the goals they are striving for. Similar to the first two domains, better self-regulation, including self-control, emotion regulation, and the adoption of effective learning strategies, typically results in higher grades, test scores, and other positive student outcomes (Duckworth et al., 2014; Gross, 1998; Winne, 2001).

Increasingly, research suggests that aspects of self-regulation that might be viewed as anticipatory are particularly important. For instance, a number of scholars within the self-regulated learning tradition have focused on planning and goal setting (Winne, 2001; Zimmerman & Schunk, 2011). Others have shown how attempts to regulate emotions are typically more successful the earlier in an emotional episode that they occur (Gross, 1998). Once students engage in a task, they must have sufficient capacity to focus their attention on the topic at hand (Monteil et al., 1996). Furthermore, they must retain a sufficient degree of self-control to persist on activities such as doing homework, paying attention while bored, getting enough sleep, delaying gratification, and so forth (Duckworth et al., 2014; Mischel, 2014). Finally, there are important self-regulation constructs that, to different degrees, require students to step back and examine their approaches to tasks. For example, during a task or during a social interaction one might engage in self-monitoring (Gangestad & Snyder, 2000). By stepping back slightly further, students can evaluate the strategic approaches they are employing (Brown, 1987).

Self-regulation remains important for learning across one's lifespan. Developing new learning strategies allows students to become better learners over time (Schunk, 1996). In a rapidly changing world, the capacity for metacognitive reflection about how to improve one's own learning processes appears to be increasingly important (Brown, 1987; Schunk, 1996).

Benefits of this conceptualization

For researchers, policymakers, and practitioners the distillation of the crowded universe of SEL models, constructs, competing curricula, etc. into three foundational domains should facilitate several important ends.

First, these three domains clarify what SEL is and which constructs are important to include. Emphasizing the social, motivational, and self-regulatory aspects of schooling facilitates a common understanding between educators but also implicitly focuses discussions on students' fundamental needs. For example, examining how well a school cultivates family engagement with families where parents do not speak the local language implicates a social relationship that will facilitate or inhibit a student's connectedness with the school. If the family-school relationship is tenuous, the student will need other relationships to compensate. By contrast, students' personality traits—notably absent from our conceptualization of SEL—constitute a lesser priority. Students with personality traits of all types can form strong social bonds, become more motivated, and develop self-regulation skills and strategies. A particular personality type is not a fundamental psychological need for students.

Second, currently, school leaders and policymakers must wade through dozens of different SEL models searching for curricula that fit their needs. Our distillation—focusing on only the “active ingredients” of SEL—provides them with an evaluative tool to help identify the best fit for their particular context. For instance, models that focus on areas that fall outside these three needs are likely focusing on domains that may not be core psychological requisites for students. Thus, these models might be more appropriate only for schools who already address students' fundamental needs well. Models that emphasize a domain where a school has particular needs might be an especially good fit—in other words, does the school most need to support students on developing social relationships, motivation, or self-regulation?

Third, this conceptualization of SEL provides a useful diagnostic tool for practitioners—one that is simple enough to remember despite the overwhelming cognitive demands of teaching. In other words, when students struggle, educators can reflect on those students' social connectedness, motivation, and self-regulation capacities. Doing so will often provide clarity into the problems particular students are facing and generate insights into how to get them back on track.

Lingering issues

We do not pretend that this conceptualization is perfect. The three domains overlap. Scholars can argue over whether a construct like self-efficacy belongs as a core ingredient of motivation or self-regulation. In addition, the boundary between students' fundamental psychological needs and other core needs is often blurry. Psychological safety might reasonably be viewed as an aspect of social connectedness; physical safety—clearly another prerequisite for optimal student outcomes—may or may not be related to one's social bonds at school. Despite the imperfections, we hope that this simple conceptualization of SEL, focused on the fundamental psychological needs of students, can help facilitate broader and more effective selection and implementation of SEL models, curricula, and policies.

Note

1. We view these fundamental psychological needs as equally applicable to teachers or people in general, but limit our scope to students for the sake of parsimony.

Notes on contributors

Hunter Gehlbach is a Professor and Vice Dean at the Johns Hopkins School of Education as well as the Director of Research at Panorama Education. An educational psychologist by training and a social psychologist at heart, his interests lie in improving the social and motivational contexts of schools.

Claire Chuter is a Ph.D. student at Johns Hopkins University - School of Education. Her primary interests lie in applying insights from social psychology to education settings, specifically focusing on social perspective-taking and teacher-student relationships.

ORCID

Hunter Gehlbach  <https://orcid.org/0000-0002-2852-2666>

Claire Chuter  <https://orcid.org/0000-0002-7415-282X>

References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Bauer, N. S., Lozano, P., & Rivara, F. P. (2007). The effectiveness of the Olweus Bullying Prevention Program in public middle schools: A controlled trial. *Journal of Adolescent Health, 40*(3), 266-274. <https://doi.org/10.1016/j.jadohealth.2006.10.005>
- Beilock, S. (2011). Back to school: Dealing with academic stress. *Psychological Science Agenda, 25*(9), 1-5.
- Brinkworth, M. E., McIntyre, J., Juraschek, A. D., & Gehlbach, H. (2018). Teacher-student relationships: The positives and negatives of assessing both perspectives. *Journal of Applied Developmental Psychology, 55*, 24-38. <https://doi.org/10.1016/j.appdev.2017.09.002>
- Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, T. L., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *The Journal of Positive Psychology, 4*(6), 500-510. <https://doi.org/10.1080/17439760903271439>

- Brown, A. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. In F. E. Weinert & R. H. Kluwe (Eds.), *Metacognition, motivation, and understanding* (pp. 65-116): Hillsdale, NJ: Lawrence Erlbaum.
- Corno, L., Cronbach, L. J., Kupermintz, H., Lohman, D. F., Mandinach, E. B., Porteus, A. W., & Talbert, J. E. (2002). *Remaking the concept of aptitude: Extending the legacy of Richard E. Snow*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Deutsch, M., & Coleman, P. T. (2000). *The handbook of conflict resolution: Theory and practice* (1st ed.). San Francisco: Jossey-Bass.
- Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2014). Self-control in school-age children. *Educational Psychologist, 49*(3), 199-217. <https://doi.org/10.1080/00461520.2014.926225>
- Duckworth, A. L., & Gross, J. J. (2014). Self-control and grit: Related but separable determinants of success. *Current Directions in Psychological Science, 23*(5), 319-325. <https://doi.org/10.1177/0963721414541462>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405-432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Dweck, C. S. (2008). *Mindset: The new psychology of success*. Random House Digital, Inc.
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. J. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. Special Issue: Adolescence. *American Psychologist, 48*(2), 90-101. <https://doi.org/10.1037/0003-066x.48.2.90>
- Elliot, A. J. (2006). The hierarchical model of approach-avoidance motivation. *Motivation & Emotion, 30*(2), 111-116. <https://doi.org/10.1007/s11031-006-9028-7>
- Epstein, J. L. (2010). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan, 92*(3), 81-96. <https://doi.org/10.1177/003172171009200326>
- Ford, M. E. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs*. Newbury Park, CA: Sage Publications.
- Ford, M. E., & Smith, P. R. (2007). Thriving with social purpose: An integrative approach to the development of optimal human functioning. *Educational Psychologist, 42*(3), 153-171. <https://doi.org/10.1080/00461520701416280>
- Freiberg, H. J. (1999). *School climate: Measuring, improving, and sustaining healthy learning environments*. Psychology Press.
- Gangestad, S. W., & Snyder, M. (2000). Self-monitoring: Appraisal and reappraisal. *Psychological Bulletin, 126*(4), 530. <https://doi.org/10.1037/0033-2909.126.4.530>
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice*. Teachers College Press.
- Gehlbach, H. (2017). Learning to walk in another's shoes. *Phi Delta Kappan, 98*(6), 8-12. <https://doi.org/10.1177/0031721717696471>
- Greene, J. P. (2019). *The moral implications of social and emotional learning*. https://blogs.edweek.org/edweek/rick_hess_straight_up/2019/07/the_moral_implications_of_social_and_emotional_learning.html
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271-299. <https://doi.org/10.1037/1089-2680.2.3.271>
- Grossman, D. C., Neckerman, H. J., Koepsell, T. D., Liu, P.-Y., Asher, K. N., Beland, K., . . . Rivara, F. P. (1997). Effectiveness of a violence prevention curriculum among children in elementary school: A randomized controlled trial. *Jama, 277*(20), 1605-1611. <https://doi.org/10.1001/jama.1997.03540440039030>
- Herrera, C., Grossman, J. B., Kauh, T. J., Feldman, A. F., & McMaken, J. (2007). Making a difference in schools: The Big Brothers Big Sisters school-based mentoring impact study. *Public/Private Ventures*.
- Hess, F. (2019). *7 suggestions for the champions of social and emotional learning*. https://blogs.edweek.org/edweek/rick_hess_straight_up/2019/04/7_suggestions_for_the_champions_of_social_and_emotional_learning.html
- Jones, S. M., Brown, J. L., & Lawrence Aber, J. (2011). Two-year impacts of a universal school-based social-emotional and literacy intervention: An experiment in translational developmental research. *Child Development, 82*(2), 533-554. <https://doi.org/10.1111/j.1467-8624.2010.01560.x>
- Kostas, P. (2017). *People in silhouette* [Photograph]. Unsplash. <https://unsplash.com/photos/tysecUm5HJA>
- Levesque, D. A., Johnson, J. L., Welch, C. A., Prochaska, J. M., & Paiva, A. L. (2016). Teen dating violence prevention: Cluster-randomized trial of Teen Choices, an online, stage-based program for healthy, nonviolent relationships. *Psychology of violence, 6*(3), 421. <https://doi.org/10.1037/vio0000049>
- Lieberman, M. D. (2013). *Social: Why our brains are wired to connect* (First ed.). New York: Crown Publishers.

- Mischel, W. (2014). *The marshmallow test: Why self-control is the engine of success*. New York: Little, Brown and Co.
- Monteil, J. M., Brunot, S., & Huguet, P. (1996). Cognitive performance and attention in the classroom: An interaction between past and present academic experiences. *Journal of Educational Psychology*, 88(2), 242. <https://doi.org/10.1037/0022-0663.88.2.242>
- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70(3), 323-367. <https://doi.org/10.3102/00346543070003323>
- Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology*, 92(3), 544-555. <https://doi.org/10.1037/0022-0663.92.3.544>
- Pondiscio, R. (2019). *Is social and emotional learning encouraging educators to pathologize childhood*. https://blogs.edweek.org/edweek/rick_hess_straight_up/2019/04/is_social_and_emotional_learning_encouraging_educators_to_pathologize_childhood.html
- Renninger, K. A., & Hidi, S. (2011). Revisiting the conceptualization, measurement, and generation of interest. *Educational Psychologist*, 46(3), 168-184. <https://doi.org/10.1080/00461520.2011.587723>
- Robinson, C. D., Scott, W., & Gottfried, M. A. (2019). Taking it to the next level: A field experiment to improve instructor-student relationships in college. *AERA Open*, 5(1). <https://doi.org/10.1177/2332858419839707>
- Roorda, D., Koomen, H., Split, J. L., & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research*, 81(4), 493-529. <https://doi.org/10.3102/0034654311421793>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY, US: Guilford Press. <https://doi.org/10.1521/978.14625/28806>
- Schunk, D. H. (1996). Goal and self-evaluative influences during children's cognitive skill learning. *American Educational Research Journal*, 33(2), 359-382. <https://doi.org/10.3102/00028312033002359>
- Snow, R. E. (1996). Aptitude development and education. *Psychology, Public Policy, and Law*, 2(3/4), 536-560. <https://doi.org/10.1037/1076-8971.2.3-4.536>
- Snow, R. E., Corno, L., & Jackson, D., III. (1996). Individual differences in affective and conative functions. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology*. (pp. 243-310). New York: Macmillan Library Reference.
- Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research*, 78(4), 751-796. <https://doi.org/10.3102/0034654308321456>
- Weiner, B. (1994). Integrating social and personal theories of achievement striving. *Review of Educational Research*, 64(4), 557-573. <https://doi.org/10.3102/00346543064004557>
- Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development*, 68(6), 1198-1209. <https://doi.org/10.1111/j.1467-8624.1997.tb01994.x>
- Wentzel, K. R., Jablansky, S., & Scalise, N. R. (2020). Peer social acceptance and academic achievement: A meta-analytic study. *Journal of Educational Psychology*. <https://doi.org/10.1037/edu0000468>; <https://doi.org/10.1037/edu0000468.supp> (Supplemental)
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68-81. <https://doi.org/10.1006/ceps.1999.1015>
- Wigfield, A., Tonks, S., & Klauda, S. L. (2009). Expectancy-value theory. *Handbook of motivation at school*, 55-75.
- Winne, P. H. (2001). Self-regulated learning viewed from models of information processing. *Self-regulated learning and academic achievement: Theoretical perspectives*, 2, 153-189.
- Yang, Y. C., Boen, C., Gerken, K., Li, T., Schorpp, K., & Harris, K. M. (2016). Social relationships and physiological determinants of longevity across the human life span. *Proceedings of the National Academy of Sciences*, 113(3), 578-583. <https://doi.org/10.1073/pnas.1511085112>
- Zimmerman, B. J., & Schunk, D. H. (2011). Motivational sources and outcomes of self-regulated learning and performance. *Handbook of self-regulation of learning and performance*, 5(3), 49-64. <https://doi.org/10.4324/9780203839010.ch4>

Appendix

Social Connectedness
<p>Social Perspective-Taking</p> <p>Gehlbach, H. (2017). Learning to walk in another's shoes. <i>Phi Delta Kappan</i>, 98(6), 8-12. https://doi.org/10.1177/0031721717696471</p>
<p>Conflict resolution/negotiation</p> <p>Deutsch, M., & Coleman, P. T. (2000). <i>The handbook of conflict resolution: Theory and practice</i> (1st ed.). Jossey-Bass.</p>
<p>Prosocial/Antisocial Behavior</p> <p>Batson, C. D., & Powell, A. A. (2003). Altruism and prosocial behavior. <i>Handbook of psychology</i>, 463-484.</p> <p>Olweus, D. (2013). School bullying: Development and some important challenges. <i>Annual Review of Clinical Psychology</i>, 9(1), 751-780. https://doi.org/10.1146/annurev-clinpsy-050212-185516</p>
<p>Peer Relationships</p> <p>Wentzel, K. R., Jablansky, S., & Scalise, N. R. (2020). Peer social acceptance and academic achievement: A meta-analytic study. <i>Journal of Educational Psychology</i>. https://doi.org/10.1037/edu0000468; https://doi.org/10.1037/edu0000468.supp (Supplemental)</p>
<p>Teacher-Student Relationships</p> <p>Brinkworth, M. E., McIntyre, J., Juraschek, A. D., & Gehlbach, H. (2018). Teacher-student relationships: The positives and negatives of assessing both perspectives. <i>Journal of Applied Developmental Psychology</i>, 55, 24-38. https://doi.org/10.1016/j.appdev.2017.09.002</p> <p>Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. <i>Review of Educational Research</i>, 77(1), 113-143. https://doi.org/10.3102/003465430298563</p> <p>Roorda, D., Koomen, H., Split, J. L., & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. <i>Review of Educational Research</i>, 81(4), 493-529. https://doi.org/10.3102/0034654311421793</p>
<p>Family School Relationships</p> <p>Epstein, J. L. (2010). School/family/community partnerships: Caring for the children we share. <i>Phi Delta Kappan</i>, 92(3), 81-96.</p> <p>Mapp, K. L., & Kuttner, P. J. (2013). Partners in Education: A Dual Capacity-Building Framework for Family-School Partnerships. <i>SEDL</i>.</p>
<p>Culturally Responsive Environment</p> <p>Gay, G. (2018). <i>Culturally responsive teaching: Theory, research, and practice</i>. Teachers College Press.</p>
<p>Sense of Belonging</p> <p>Juvonen, J. (2006). Sense of belonging, social bonds, and school functioning. In P. A. Alexander & P. H. Winne (Eds.), <i>Handbook of educational psychology</i>. (pp. 655-674). Lawrence Erlbaum Associates Publishers.</p> <p>Osterman, K. F. (2000). Students' need for belonging in the school community. <i>Review of Educational Research</i>, 70(3), 323-367.</p>
<p>School Climate</p> <p>Freiberg, H. J. (Ed.). (1999). <i>School climate: Measuring, improving, and sustaining healthy learning environments</i>. Psychology Press.</p> <p>Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. <i>Review of educational research</i>, 83(3), 357-385. https://doi.org/10.3102/0034654313483907</p>

Table 1: Exemplar Constructs and Literature for Social Connectedness

Motivation
<p>Goals/Goal Orientation/Purpose</p> <p>Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, T. L., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. <i>The Journal of Positive Psychology, 4</i>(6), 500-510. https://doi.org/10.1080/17439760903271439</p> <p>Elliot, A. J. (2006). The hierarchical model of approach-avoidance motivation. <i>Motivation & Emotion, 30</i>(2), 111-116.</p> <p>Ford, M. E., & Smith, P. R. (2007). Thriving with social purpose: An integrative approach to the development of optimal human functioning. <i>Educational Psychologist, 42</i>(3), 153-171.</p> <p>Pintrich, P. R. (2000). An achievement goal theory perspective on issues in motivation terminology, theory, and research. <i>Contemporary educational psychology, 25</i>(1), 92-104.</p>
<p>Competency Beliefs/Expectations of Success</p> <p>Bandura, A. (1997). <i>Self-efficacy: The exercise of control</i>. W.H. Freeman.</p> <p>Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. <i>Review of educational research, 78</i>(4), 751-796. https://doi.org/10.3102/0034654308321456</p> <p>Wigfield, A., Tonks, S., & Klauda, S. L. (2009). Expectancy-value theory. <i>Handbook of motivation at school, 55-75</i>.</p>
<p>Energy to Catalyze Goal Pursuit</p> <p>Ford, M. E. (1992). <i>Motivating humans: Goals, emotions, and personal agency beliefs</i>. Sage Publications.</p> <p>Renninger, K. A., & Hidi, S. (2016). <i>The power of interest for motivation and engagement</i>. Routledge.</p>
<p>Motivation Attributions and Dispositions</p> <p>Duckworth, A. (2016). <i>Grit: The power of passion and perseverance</i>. New York, NY: Scribner.</p> <p>Dweck, C. S. (2008). <i>Mindset: The new psychology of success</i>. Random House Digital, Inc.</p> <p>Weiner, B. (1994). Integrating social and personal theories of achievement striving. <i>Review of Educational Research, 64</i>(4), 557-573.</p>
<p>Intrinsic vs. Extrinsic</p> <p>Ryan, R. M., & Deci, E. L. (2017). <i>Self-determination theory: Basic psychological needs in motivation, development, and wellness</i>. Guilford Press.</p>

Table 2: Exemplar Constructs and Literature for Motivation

<p>Self-Regulation</p>
<p>Planning/ Strategic Goal-Setting</p> <p>Winne, P. H. (2001). Self-regulated learning viewed from models of information processing. In B. J. Zimmerman & D. H. Schunk (Eds.), <i>Self-regulated learning and academic achievement: Theoretical perspectives</i> (p. 153–189). Lawrence Erlbaum Associates Publishers.</p> <p>Zimmerman, B. (2011). Motivational sources and outcomes of self-regulated learning and performance. In B. Zimmerman & D. Schunk (Eds.), <i>Handbook of self-regulation of learning and performance</i> (pp. 49-64). Routledge.</p>
<p>Emotion Regulation/Stress Management</p> <p>Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. <i>Review of General Psychology</i>, 2(3), 271-299. https://doi.org/10.1037/1089-2680.2.3.271</p> <p>Beilock, S. (2011). Back to school: Dealing with academic stress. <i>Psychological Science Agenda</i>, 25(9), 1-5.</p>
<p>Cognitive Regulation/Focus</p> <p>Monteil, J. M., Brunot, S., & Huguet, P. (1996). Cognitive performance and attention in the classroom: An interaction between past and present academic experiences. <i>Journal of Educational Psychology</i>, 88(2), 242.</p>
<p>Self-Control</p> <p>Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2014). Self-control in school-age children. <i>Educational Psychologist</i>, 49(3), 199-217.</p> <p>Mischel, W. (2014). <i>The marshmallow test: Why self-control is the engine of success</i>. Little, Brown and Co.</p>
<p>Self-Monitoring</p> <p>Gangestad, S. W., & Snyder, M. (2000). Self-monitoring: Appraisal and reappraisal. <i>Psychological Bulletin</i>, 126(4), 530-555.</p>
<p>Metacognition/Self-Reflection</p> <p>Brown, A. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. In F. E. Weinert & R. H. Kluwe, (Eds.) <i>Metacognition, motivation, and understanding</i> (pp. 65-116). Hillsdale, NJ: Lawrence Erlbaum.</p> <p>Schunk, D. H. (1996). Goal and self-evaluative influences during children’s cognitive skill learning. <i>American educational research journal</i>, 33(2), 359-382.</p>

Table 3: Exemplar Constructs and Literature for Self-Regulation