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Promoting Student Engagement From Childhood to Adolescence as a Way to Improve Positive Youth Development and School Completion

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INTRODUCTION

From childhood to adolescence, student engagement represents a key factor for positive youth development and lifelong positive outcomes (Rumberger & Lamb, 2003). This multifaceted construct includes behavioral, affective, and cognitive dimensions (Fredricks, Blumenfeld, & Paris, 2004), and has been shown to promote the development of important skills favoring youth academic achievement and adjustment, as well as school completion (Archambault, Janosz, Fallu, & Pagani, 2009). In recent decades, research has identified a number of negative consequences associated with student disengagement, including increased risk of problem behaviors, drug use, delinquency, and depression (Li & Lerner, 2011; Wang & Fredricks, 2014). From early schooling and throughout adolescence, students who present signs of disengagement are also more likely to drop out of high school (Alexander, Entwisle, & Horsey, 1997). Fortunately, studies have demonstrated that, from kindergarten to 12th grade, effective prevention and intervention strategies can be implemented to promote students' behavioral, affective, and cognitive engagement in school (Christenson & Thurlow, 2004). The chapter first defines engagement as a multidimensional construct, then reviews existing studies linking engagement to positive developmental and school outcomes, and concludes with a discussion of evidence-based interventions aimed at increasing student engagement.

STUDENT ENGAGEMENT AS A MULTIDIMENSIONAL CONSTRUCT

Until the major literature review conducted by Fredricks et al. (2004), research on student engagement was very scattered. Measures of the construct were based on a broad spectrum of terms hindering its comprehension, such as school bonding, connectedness, identification, participation, and commitment (Finn, 1989; Fredricks et al., 2004; Gottfredson, Fink, & Graham, 1994). With engagement generally defined in terms of active investment and involvement of youth in school (Finn, 1989), there is now a strong consensus around the idea that this construct is multidimensional and includes student behaviors, emotions, and cognitions. Behavioral engagement refers to active participation in school in general, as well as in classroom-related work. Students who are behaviorally engaged attend class, follow teacher instructions, participate in classroom-related activities, and complete their assignments (Fredricks et al., 2004; Rumberger & Larson, 1998). Alternatively, affective engagement refers to

student feelings and emotions regarding school in general—for example, whether they appreciate it or not—and regarding task-specific learning, for example, how they feel when approaching a specific task or subject matter, such as math, sciences, or literature (Eccles, Wigfield, Harold, & Blumenfeld, 1993). Finally, student cognitive engagement is defined in terms of students' efforts invested in learning and of the self-regulation strategies they use to plan and monitor their learning (Appleton, Christenson, Kim, & Reschly, 2006). Overall, these dimensions of student engagement are interrelated, as student affect and cognitions regarding school- and learning-related variables contribute to their behavioral engagement (Archambault, Janosz, Fallu et al., 2009). Moreover, research suggests that the three dimensions of engagement evolve over time, as students go through different stages of schooling (Li, Lerner, & Lerner, 2010).

Student engagement is a malleable process (Rumberger & Larson, 1998). This process begins in early schooling and evolves over time in response to transactions between the developing child and the characteristics of his or her environments (Eccles et al., 1993; Simons-Morton & Chen, 2009). Although some students remain engaged over time, a high proportion of them present signs of disengagement anytime from entry into school onward (Archambault & Dupéré, 2017; Janosz, Archambault, Morizot, & Pagani, 2008; Li & Lerner, 2011; Wang & Fredricks, 2014). As discussed next, the behavioral, affective, and cognitive decreases these children experience in terms of their engagement over time are central, as they contribute to their adjustment and maladjustment on different outcomes.

CONSEQUENCES OF STUDENT ENGAGEMENT AND DISENGAGEMENT

The nature and course of student engagement are associated with different consequences across development. From school entry and throughout different stages of schooling, student behavioral, affective, and cognitive engagement in school or in classroom-related activities has repeatedly been associated with their achievement (Fall & Roberts, 2012; Hughes, Luo, Kwok, & Loyd, 2008; Ladd & Dinella, 2009; Li et al., 2010; Reyes, Brackett, Rivers, White, & Salovey, 2012). For instance, students who report higher participation, interest, and identification with school, and who demonstrate higher cognitive engagement by regularly using self-regulated learning strategies have higher grade point averages (GPA) and academic performance. These findings have been found to be quite consistent in different samples of students from various ethnic and cultural backgrounds (Sciarra & Seirup, 2008; Sirin & Rogers-Sirin, 2004). Moreover, over time, students who maintain a high level of behavioral and affective engagement are also more likely to have higher grades (Li & Lerner, 2011). Nevertheless, the association between the longitudinal trajectory of student cognitive engagement and their academic competence do not seem to be as well established, and the link between student affective engagement trajectory and their academic achievement is not consistent across studies. Indeed, some authors (Wang & Peck, 2013; Wang & Fredricks, 2014) suggest that student emotional disinvestment in school over time may somehow be developmentally normative and not necessarily associated with lower academic achievement, while others (Li et al., 2010) posit that the association between student affective engagement trajectory and achievement is indirect and mediated by student behavioral engagement.

Student engagement, and especially the behavioral and affective dimensions, has also been associated with problem behaviors in school or in other contexts. For example, from the end of elementary school and after, students who skip school, do not complete their assignments, do not follow classroom rules, or show disinterest and disaffection in school are more likely to report serious problem behaviors in adolescence and early adulthood, such as general delinquency, serious offenses, and drug use (Henry, Knight, & Thornberry, 2012; Hirschfield & Gasper, 2011; Li & Lerner, 2011; Li et al., 2011). This supports the idea that student misconduct and behavioral and emotional disengagement evolve together and mutually reinforce one another over time (Wang & Fredricks, 2014). Yet, the association between student cognitive engagement and problem behaviors is less clear. While some authors (Wang & Fredricks, 2014) suggest that cognitive engagement is not associated with changes in adolescent delinquency and drug use, others have proposed that cognitive engagement is positively associated with school and general delinquency (Hirschfield & Gasper, 2011). However, these last findings remain quite hard to explain and definitely need to be further investigated and replicated.

The consequences of student engagement or disengagement over time on their emotional well-being or difficulties have been less well established. Yet, some studies have shown that high investment and participation in school is associated with positive adjustment (Simons-Morton & Crump, 2003), emotions, and use of effective coping skills (Reschly, Huebner, Appleton, & Antaramian, 2008). More recently, research demonstrated that adolescents showing a decrease in behavioral or affective engagement reported higher psychological distress and

presented more depressive symptoms (Li & Lerner, 2011; Wang & Peck, 2013). Yet, the contribution of student cognitive engagement to internalizing symptoms still needs to be understood.

Finally, student engagement is also firmly acknowledged in most theories as a central process associated with student dropout (Dupéré et al., 2015; Finn, 1989; Rumberger & Larson, 1998). This theoretical assumption is now well supported empirically; there is clear evidence suggesting that disengagement predicts dropout among students in various populations, from different countries, and with different cultural backgrounds (Archambault, Janosz, Dupéré, Brault, & Andrew, 2017; Fall & Roberts, 2012; Henry et al., 2012; Wang & Fredricks, 2014), including students presenting learning or affective disabilities (Reschly & Christenson, 2006). Past research has also suggested that the three dimensions of engagement significantly predict school dropout, and that the risk of dropping out increases when they report disengagement on multiple facets of their school experience (Archambault, Janosz, Morizot, & Pagani, 2009; Wang & Fredricks, 2014). Yet, student behavioral, affective, and cognitive engagement might not have equal weights as predictors of student dropout in high school. For instance, some authors have suggested that student behavioral engagement is the only dimension associated with school withdrawal (Archambault, Janosz, Fallu, et al., 2009), while others have found that both the affective and behavioral dimensions seem to be associated with this outcome (Wang & Fredricks, 2014). To add to this complexity, research has identified different trajectories leading student to dropout (Archambault, Janosz, Morizot, et al., 2009; Li & Lerner, 2011; Wang & Eccles, 2012), various profiles of students who actually drop out (Bowers, 2010; Janosz, Le Blanc, Boulerice, & Tremblay, 2000), and different timings associated with school withdrawal in adolescence (Dupéré et al., 2018). Overall, this suggests that the different processes associated with student disengagement and dropout are not simple to apprehend and that, when implementing intervention strategies among students at risk, one needs to consider these student differential needs.

PROMOTING STUDENT ENGAGEMENT, POSITIVE DEVELOPMENT, AND SCHOOL COMPLETION

Numerous evidence-based programs aim at promoting student engagement for its own sake, or as a way to favor youth positive development and school completion. They generally fall into three broad categories, but the terminology employed to refer to them varies from one field to another. For example, in the field of public health, this continuum is labeled in terms of primary, secondary, and tertiary interventions (Baumann & Karel, 2013), while in the mental health domain, authors refer to it in terms of universal, selective, and intensive levels of intervention (Coie, Miller-Johnson, & Bagwell, 2000). In schools, it is more common to discuss a three-tiered model of intervention comprising universal (tier 1), selective (tier 2), and intensive (tier 3) interventions. In this chapter, we thus adopted this terminology.

While universal initiatives include programs that are addressed to an entire student population within a specific context (e.g., neighborhood, school, classroom), selective and intensive strategies target-specific groups of students. In the first case, selective interventions or prevention programs target students who present a certain level of risk (of disengagement, for example) higher than the population average, based on their individual, family, community, or neighborhood characteristics. Conversely, intensive interventions are usually intended for youth who already present important difficulties and who often have done so for a long time.

Different sets of principles have been proposed to identify effective universal, selective, and intensive prevention and intervention strategies in social science (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Freeman & Simonsen, 2015; Nation et al., 2003). The first of these principles is that effective prevention and intervention strategies are based on multiple learning or skill development strategies—for example, prosocial and problem-solving skills—and target multiple components—that is, a combination of two or more interventions implemented for different groups of individuals, such as youths, families, or schools. Effective programs also incorporate training sessions for the practitioners leading their implementation, and begin early enough, before problems appear, increase, crystalized, and become difficult to eliminate. Further, they have to be based on precise goals and objectives, timely and age appropriate, and targeted to participants' developmental stage. Programs should also be rooted in solid theoretical bases, promote the development of positive relationships, be sensitive to participant sociocultural background and characteristics, address school organizational structure, be implemented with sufficient dosage, and have been evaluated rigorously.

Unfortunately, many programs aiming to promote student engagement, positive development, and school completion do not meet one or many of the general requirements associated with effective strategies

(Christenson & Thurlow, 2004; Freeman & Simonsen, 2015), mainly because they lack rigorous evaluations attesting their effectiveness or efficacy. Notwithstanding, some programs have been subjected to rigorous evaluation, which increases the validity of their conclusions. In the following section, we review 10 programs that were aimed at promoting student engagement either directly or indirectly as a way to promote positive youth development and/or school completion.

To obtain this list, we first searched two databases, ERIC and PsycINFO. We used a large set of keywords related to the student engagement construct (e.g., behavioral, affective, and cognitive engagement/disengagement, school involvement, participation, belongingness, affiliation, work regulation, and planning), outcomes (e.g., achievement, dropout), and to program assessment (e.g., program evaluation, effect, efficacy trial, and randomized trial). Through this search, we first obtained a list of 91 programs and selected 38 that addressed student engagement for its own sake, or as a way to promote students' positive development or school completion. Programs also ought to have been rigorously evaluated using an experimental design—that is, random assignment of participants to intervention and control group—or a quasi-experimental design, a design that does not use random assignment of participants to an intervention and control group but does control for variables that may influence the outcome. At this step, we excluded instructional interventions as these are presented elsewhere in this handbook (see Chapter 8: Instructional Interventions That Support Student Engagement: An International Perspective), but we chose to report certain multilevel programs that included instructional components in addition to other individual, family, and/or school components.

Among the remaining programs ($n = 23$), we selected 10 interventions that have been implemented from kindergarten to grade 12 and among different groups of at-risk and “not-at-risk” students—that is, presenting or not presenting behavioral, emotional, or psychosocial difficulties. Our goal was to select representative universal, intensive, selective, or multilevel (e.g., combining universal and selective or universal and intensive components) evidence-based programs that can be implemented in schools and/or in the community. These programs are described in Table 2.1, starting with universal, selective, or intensive programs, and followed by multilevel programs.

UNIVERSAL PROGRAMS (TIER 1)

Universal prevention programs are designed to reach an entire population of students, regardless of their individual or family risk factors. These programs aim to reach everyone in a specific population, for example, all students in a school. Table 2.1 presents two different universal programs aimed at improving student engagement. The *Seattle Social Development Project* (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001) is a universal program following students for 6 consecutive years, from grades 1 to 6. Its goal is to promote student affective engagement, that is, school bonding, as a protective factor against the development of behavioral and health problems. It comprises three components. First, teachers receive training sessions on classroom instruction and management methods, including proactive classroom management techniques, interactive teaching, and cooperative learning. Second, students receive social and affective skills development training in first grade, via activities on interpersonal problem-solving and refusal skills. Third, parents receive training in developmentally appropriate skills, such as behavior management, academic support, and skills to reduce risks for drug use. Different impact assessment studies using quasi-experimental designs showed that the program was associated with positive short- and long-term gains (through age 30) on different outcomes, including student behavioral and affective engagement at 17 or 18 years old (Hawkins et al., 2001; Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999).

The *Iowa Strengthening Families Program* (Molgaard, Kumpfer, & Fleming, 1997) is another universal program that serves sixth-grade students and their parents. The long-term goals of the program are to reduce substance use and increase student engagement in general, as well as their academic performance, by enhancing parent and youth skills (intermediate goals). As opposed to the *Seattle Social Development Project*, which extended over 6 years, this intervention runs over seven weekly sessions. Each session comprised separate and joint activities for youths and their parents. Youth sessions addressed issues such as goal setting for the future, stress management, building responsibility, and dealing with peer pressure. Parent sessions comprised discussions on youth development and social influences, on how to provide nurturing support, to set limits, etc. During the joint family part of the session, participants were invited to practice the skills (e.g., respectful communication, problem resolution) learned in separate youth and parent sessions. Using an experimental design, results of the efficacy assessment

TABLE 2.1 Universal, Selective, Intensive, or Multilevel Programs Promoting Student Engagement.

Intervention (authors)	Type of intervention (universal, selective, intensive)/age-group	Intervention objectives	Intervention description (components, length, etc.)	Evaluation method (design and sample)	Evaluation—impact assessment
Seattle Social Development Project (Hawkins, Von Cleve, & Catalano, 1991)	Type: Universal Age-group: Grade 1–6 students	Promoting school bonding (<i>affective engagement</i>) as a protective factor against the development of behavioral and health problems	Multicomponent intervention: <ul style="list-style-type: none"> • Proactive classroom management and instruction methods • Social skills training • Parent-training curricula 	A quasi-experimental longitudinal design among a heterogeneous sample (White, African-American, Asian) student from low-income households (Hawkins et al., 1999, 2001) Full intervention group (grades 1–6), $n = 143^a$ Late intervention group (grades 5–6), $n = 243^a$ Control group, $n = 206^a$	<ul style="list-style-type: none"> • Positive short- and long-term impact (decrease) on several outcomes at different ages: externalizing behaviors, delinquency, alcohol, cigarette, and drug use, lifetime violence, sexual activity, sexually transmitted diseases, etc.^b • Positive impact on school conduct (<i>behavioral engagement</i>) • Positive impact of the full intervention but not of the late intervention on school bonding (<i>affective engagement</i>) at age 18
ISFP (Molgaard et al., 1997)	Type: Universal Age-group: Grade 6 students and their parents	Long-term goals (youths): Reduction of youth substance use and problem behaviors <i>Enhancement of school engagement and academic performance</i> Intermediate goals (parents): Enhancement of parental skills in nurturing, limit setting, and communication Intermediate goals for youth: Enhancement of prosocial and peer resistance skills	Seven sessions conducted once a week for 7 weeks Themes of youth sessions: Strengthening future goals, stress management, building responsibility, and dealing with peer pressure Themes of parent sessions: youth development and social influences, providing support, setting limits, etc.	Experimental longitudinal design (random assignment at the school level) (Spoth et al., 2008) 22 participating rural schools and 446 sixth graders (mostly White) <ul style="list-style-type: none"> • 238 experimental group • 208 control group 	<ul style="list-style-type: none"> • Academic success in grade 12 through direct effect on <i>school engagement</i>,^c parenting competency, and decrease in youth substance–related risk • Positive indirect impact on <i>school engagement</i>^c through direct effect on parenting competency and decrease in youth substance–related risk
Bridges to High School Program/Projecto Puentes a la Secundaria (Gonzales et al., 2012)	Type: Selective age Group: Grade 7 Hispanic students and their parents	Strengthening home–school connection and developing youth competencies for successful transition through middle and high school Decrease of adolescent substance use, internalizing and externalizing symptoms Increase in school discipline and grades	Three components: <ul style="list-style-type: none"> • Parenting intervention on effective parenting, family cohesion, promotion of school engagement; • Adolescent coping intervention on coping efficacy, academic engagement, and family cohesion; • Family strengthening intervention on family cohesion and skills practicing <p>a. Nine weekly evening group sessions in schools</p>	Longitudinal experimental design stratified by language of program delivery (English vs Spanish) 516 Mexican adolescents across four urban schools: <ul style="list-style-type: none"> • 338 experimental group • 178 control group 	<ul style="list-style-type: none"> • Positive impact on parenting, adolescent coping efficacy, adolescent <i>school engagement</i> (composite score mostly based on <i>behavioral and affective engagement indicators</i>), and family cohesion • For youth from Spanish-speaking families the effect of the intervention on grades and on decreasing externalizing and internalizing symptoms was mediated by <i>school engagement (behavioral and affective)</i>

(Continued)

TABLE 2.1 (Continued)

Intervention (authors)	Type of intervention (universal, selective, intensive)/age-group	Intervention objectives	Intervention description (components, length, etc.)	Evaluation method (design and sample)	Evaluation—impact assessment
RYPEN (Martin, 2005)	Type: Selective Age-group: 14–16-year old Students experiencing difficulties	Providing an opportunity for youth to self-evaluate themselves as a way to promote their academic <i>engagement</i> and motivation	Two sessions: <ul style="list-style-type: none"> Defining and understanding motivation and barriers to change; Strategies to promote engagement and motivation 	Quasi-experimental longitudinal design with a weighted comparison sample of students from diverse urban high schools in Australia <ul style="list-style-type: none"> 53 students in the experimental group. 2769 students in the <i>comparison sample</i> 	<ul style="list-style-type: none"> Positive impact 8 weeks after program implementation on self-efficacy, and mastery orientation Positive impact 8 weeks after program on <i>affective</i> (valuing of school), <i>cognitive</i> (planning, study management), and <i>behavioral</i> (persistence) <i>engagement</i>
C&C (Christenson et al., 2012)	Type: intensive Age-group: Students in grades K-12 who are marginalized, disengaged	Enhancing student <i>engagement</i> at school and with learning Fostering school completion with academic and social competence	Two-year intervention Four components: <ul style="list-style-type: none"> Mentor who works with students and families for a minimum of 2 years Regular checks, utilizing data schools already collect on students' school adjustment, behavior, and educational progress Timely interventions, driven by data, to reestablish/maintain connection to school and enhance social and academic competencies Engagement with families 	Several studies, including: <p>Experimental design with 216 elementary school students (mostly White) from seven semirural schools in Quebec (Canada) (Archambault et al., 2016)</p> <p>Experimental design with 144 secondary school students (mostly African-Americans) presenting affective or behavioral disabilities and coming from an urban school district (Sinclair et al., 2005)</p>	<ul style="list-style-type: none"> After 2 years of intervention, positive impact on students' mastery goals and academic performance in literacy. Reduction of affective problems, social seclusion, attention problems, improved <i>behavioral</i>, and <i>affective engagement</i> Positive impact after 4 years of intervention: students less likely to drop out, decrease in student mobility, and improvement of persistent attendance (<i>behavioral engagement</i>)
Collaborative Life Skill Program (Piffner et al., 2016)	Type: Intensive Age-group: Grade 2–5 students presenting with inattention and/or hyperactive–impulsive behaviors	Improvement of ADHD symptoms, problem behaviors, social skills, academic functioning, achievement, <i>cognitive</i> (organizational skills) and <i>behavioral engagement</i>	12 weekly sessions Three integrated components: <ul style="list-style-type: none"> Group behavioral parent training on homework time, organization, social skills, etc.; Classroom behavioral intervention (daily report card, homework plan, individualized accommodations); Children social and autonomy skills groups (sportsmanship, accepting consequences, problem-solving) 	Experimental design; Two-level (students, schools) cluster randomized controlled trial 134 Children (White, African-American, Asian, Hispanic, others) across 23 urban elementary schools <ul style="list-style-type: none"> 72 students in the experimental group; 62 students in the control group 	<ul style="list-style-type: none"> Positive impact on ADHD (home and school) and oppositional (home) symptoms (Cohen's <i>d</i> ranging from 0.35 to 1.05) Positive impact on <i>cognitive engagement</i> (organizational skills) (Cohen's <i>d</i> ranging from 0.68 to 1.09). Positive impact on academic functioning (higher proportion of students in the experimental group functioning at or above the average range)

Career Academies (Kemple & Snipes, 2000)	Type: Universal and selective Age-group: High school students (grades 9–12)	<i>Promoting student engagement</i> , providing work-related learning experiences, and facilitating transitions from high school to college or postsecondary employment	Three core features implemented for a minimum of one school year: <ul style="list-style-type: none"> • School-within-a-school: students stay with a group of teachers for 3 or 4 years; • Combination of academic and vocational curricula based on career themes (healthcare, finance, technology, communications, public service); • Partnership with local employers, higher education institutions, and the community 	Experimental 3 or 4-year longitudinal design. 1764 students (mostly Hispanic and African-American) across nine urban high schools and their Career Academies. Three groups based on student disengagement: <ul style="list-style-type: none"> • 474 high risk • 869 medium risk • 421 low risk Random assignment to two conditions: <ul style="list-style-type: none"> • Experimental group, $n = 959$ • Control group, $n = 805$ 	High-risk group: <ul style="list-style-type: none"> • Positive impact on credit earned, preparation for postsecondary education, <i>behavioral engagement</i> (attendance), and perseverance (lower dropout) • No impact on positive youth development activities (e.g., participation in volunteer work or extracurricular activities) or negative risk-taking behaviors (e.g., drug use in school, arrest)
L2L (Atkins et al., 2015)	Type: Universal and intensive Age-group: Grade 4 students presenting behavior disorders	Improvement of student behaviors at home and in school, including <i>classroom engagement</i>	A service model delivered in classrooms and homes by a team composed of a community mental health provider, a parent advocate, and a teacher Two universal interventions: Good Behavior Game and Peer-Assisted Learning; Two targeted interventions involving teachers and parents: daily report card and good news notes One targeted intervention for families	A 3-year longitudinal multimethod, multiinformant experimental design. Collaboration with four community mental health agencies and seven low-income public elementary schools (four in the experimental group) Experimental group, $n = 104$ children Control group, $n = 67$ children	<ul style="list-style-type: none"> • Positive impact on mental health services use • Positive impact on social skills, on-task behaviors, and on <i>behavioral engagement</i> • Positive impact on academic competence • No impact on reading fluency
ALAS (Larson & Rumberger, 1995)	Type: Intensive and selective Age-group: Latino high school students presenting severe affective or learning disabilities or presenting risk of school dropout	Preventing school dropout by improving <i>engagement</i> and perseverance	Three-year intervention with <ul style="list-style-type: none"> • Adolescents: Problem-solving, counseling, attendance monitoring, enhancement of school affiliation; • School: Frequent teacher feedback to students and parents, monitoring; • Families: The use of community resources, parent training in school participation and adolescent monitoring; • Community: Enhancement of skills and collaboration between community services 	Experimental longitudinal design. Five groups: <ul style="list-style-type: none"> • 60 students in the low-risk control group; • 48 students in the high-risk control group; • 46 students in the high-risk experimental group; • 33 and 44 students with learning disability or severely affective disturbance experimental group; • 55 students with learning disability or severe affective disturbance—experimental groups 	<ul style="list-style-type: none"> • After 3 years, positive impact on student enrollment, credits earned, and perseverance (decrease in dropout) • Positive impact on <i>behavioral engagement</i> (lower absenteeism), academic performance, and success (lower rates of failure) • These positive effects were not sustained for the high-risk group 2 years after intervention

(Continued)

TABLE 2.1 (Continued)

Intervention (authors)	Type of intervention (universal, selective, intensive)/age-group	Intervention objectives	Intervention description (components, length, etc.)	Evaluation method (design and sample)	Evaluation—impact assessment
PBIS (Horner et al., 2005)	Type: Universal, selective, and intensive Age-group: K-12 students	Four major aims: <ul style="list-style-type: none"> • Decreasing punitive responses to problem behavior; • Increasing <i>academic engagement</i>; • Improving academic achievement; • Improving school–family partnership 	Three-year intervention Main components (universal level): <ul style="list-style-type: none"> • Fixing consensus-driven behavior expectations; • Teaching interpersonal skills; • Providing systematic reinforcement; • Monitoring intervention efficacy; • Formulating discipline practices with all actors; • Reducing reactive punitive strategies and replacing them with proactive ones 	Many implementation and efficacy assessments in different contexts throughout K-12. Only one based on an experimental design (Horner et al., 2005): Randomized control trial. <ul style="list-style-type: none"> • 60 elementary schools (K-5) from two states (61% of student from non-White ethnicity) • 33–30 schools experimental and control groups 	<ul style="list-style-type: none"> • Positive impact on school safety • Positive impact on reading performance • Positive impact on <i>behavioral engagement</i> (decrease in office discipline referrals) (preintervention data were not available, limiting this finding)

^aSample sizes vary slightly from one study to another.

^bSee Hill et al. (2014) for a summary of principal results.

^cSchool engagement based on the behavioral, affective, and cognitive dimensions.

ALAS, Achievement for Latinos Through Academic Success; C&C, Check & Connect program; ISFP, Iowa Strengthening Families Program; L2L, Links to Learning; PBIS, Positive Behavioral Interventions and Supports; RYPEN, Rotary Youth Program of Enrichment.

showed that the intervention had positive effects on different outcomes measured 6 years later, such as student global engagement (i.e., school liking, attention, work organization, and completion) (Spath, Randall, & Shin, 2008).

SELECTIVE PROGRAMS (TIER 2)

As discussed previously, selective programs (tier 2) target subgroups of students from the general population presenting a certain level of risk of disengagement or school dropout, based on their individual, family, community, or neighborhood characteristics. As an example, the *Bridges to High School Program/Proyecto Puentes a la Secundaria* (Gonzales et al., 2012) is a selective program developed for low-socioeconomic (SES) seventh-grade Hispanic students and their parents having English or Spanish as a primary language spoken at home. Like other similar brief family interventions (Stormshak, Fosco, & Dishion, 2010), the main objectives of this program are to strengthen the home and school environment connection, develop youth competencies, reduce substance use, internalizing and externalizing symptoms, and increase students' discipline with school and academic performance. In turn, these improvements are meant to facilitate a successful transition to middle and high school. This program, which runs over 9 weeks, includes three main components: a parent component, an adolescent component, and a family strengthening component. During the parent sessions, the aim is to teach effective parenting strategies—including strategies intended to promote student engagement and improve family cohesion—using active learning activities on different topics (e.g., supportive parenting, discipline, positive reinforcement, and communicating with teachers). In a separate room, adolescent sessions address coping strategies to deal with interpersonal and school stress, ways to improve social skills, exploration of future goals to strengthen academic engagement, and strategies to improve family cohesion. Finally, joint family sessions, which follow the separate youth and parent sessions, provide opportunities for participants to practice together the skills learned as a way to increase family cohesion. The efficacy assessment of this program (see Gonzales et al., 2012) was realized in four urban schools chosen for their high proportion of Mexican Americans, the availability of families speaking either English or Spanish as a primary language, their similar size and structure (i.e., serving seventh and eighth graders only), and for their high proportion (75%–85%) of students eligible for free or reduced lunches. Overall, results of this assessment which was based on an experimental design showed that the program improved parents' and adolescents' skills, as well as behavioral and affective engagement, that is, school liking and school perseverance, even though only a third of the families attended all nine sessions (while two-thirds attended at least five sessions).

The *Rotary Youth Program of Enrichment* (RYPEN; Martin, 2005) is another selective program that has been implemented among 14- to 16-year-old students considered at risk based on various difficulties (e.g., decreased motivation, low self-esteem, vocational confusion, and school failure). The goal of this program is to provide an opportunity for youth to think about themselves, where they are in their life, and where they are headed, to favor their motivation and academic engagement, in terms of its three dimensions. The program focuses on mastery orientation (e.g., focusing on learning, skills development), optimistic and positive orientation, development of teamwork, cooperation, and quality of relationship. These themes are covered in two sessions. The first session allows adolescents to understand the motivation and the barriers to change, whereas the second aims at developing strategies to strengthen engagement and motivation in school. Overall, the assessment of this program, based on a quasi-experimental design, showed that the intervention yielded positive effects on student motivation 8 weeks after implementation, as well as on students' behavioral (i.e., persistence), affective (i.e., valuing of school), and cognitive (i.e., planning and study management) engagement.

INTENSIVE PROGRAMS (TIER 3)

Intensive prevention programs (tier 3) are designed for students exhibiting important risk factors, typically for a long period of time, such as school failure, truancy, interpersonal problems, delinquency, drug use, anti-social behaviors, anxiety, or depression. The *Collaborative Life Skill Program* (Pfiffner, Villodas, Kaiser, Rooney, & McBurnett, 2013) is a good example of intensive intervention for students presenting inattention and/or hyperactive–impulsive behaviors. This program aims to reduce the severity of these children's attention deficit hyperactivity disorder (ADHD) symptoms, while increasing their social skills, academic achievement, and functioning,

including their cognitive (i.e., organizational skills) and behavioral engagement (i.e., self-control). Divided into 12 sessions, the program includes three main components: a parent-training intervention, a classroom intervention, and a child-oriented intervention. The parent-training component includes 10 1-hour group meetings focusing on themes such as the effective use of commands, rewards, and discipline, and homework time. The classroom intervention component includes two group meetings with teachers and two or three individual meetings with the children, their parents, and the teacher. It also employs a school-home daily report card where teachers monitor a specific classroom challenge (academic work, social interactions, etc.) for each target children, as well as a homework plan, and classroom accommodations (e.g., appropriate use of praise, better seating in the classroom). Finally, the children component comprises nine group sessions with the targeted children during which youths are taught different skills (e.g., self-control, organizing and completing work, following classroom routines). It also includes two celebratory parties to which parents and teachers are invited. Results of the randomized controlled trial showed that this program contributed to improving student cognitive engagement (i.e., organizational skills) and academic functioning.

Check & Connect (C&C) (Christenson, Stout, & Pohl, 2012) is an intensive prevention program, which aims to promote student behavioral, affective, and cognitive engagement in school to support academic achievement, school perseverance and success, as well as to prevent school dropout. This program is described in depth elsewhere in this handbook (see Chapter 18: Implementing Check & Connect: Lessons from Two International Effectiveness Experiments), but overall it targets students at risk of school dropout, mostly based on their repeated truancy, disruptive behaviors in school, low academic grades, and repeated failures. This program includes four components: mentoring, systematic monitoring of student attitudes, behaviors, and achievement (*Check*), individualized interventions (*Connect*), and communication with families. *Mentors* play a major role in the intervention. Each selected student is matched with a mentor who promotes student engagement and perseverance in school and is responsible for implementing the other components. The *Check* component refers to the systematic weekly monitoring of student attendance, participation, classroom behaviors, and work completion, while the *Connect* component refers to individualized weekly interventions put in place to help students in dealing with their difficulties. Finally, communication with the family is intended to promote parent involvement in support of children's academic success. These communications are initiated by the mentor and are meant to favor the development of a significant relationship with the family.

Many efficacy and effectiveness assessments of the C&C program have been realized in different contexts and countries (Archambault et al., 2016; Heppen, Zeiser, Holtzman, O'Cummings, Christenson, & Pohl, 2018; Lehr, Sinclair, & Christenson, 2004; Sinclair, Christenson, Evelo & Hurley, 1998; Sinclair, Christenson, & Thurlow, 2005). Evaluations that were based on experimental or quasi-experimental designs suggest that the program increases behavioral, affective, and cognitive engagement. More specifically, they highlight that C&C is associated with increased attendance for students in K-12, and those with and without disabilities. In elementary school the program is also associated with student academic achievement and an increased sense of belonging at school. In high school the program has been associated with increased accrual of credits, but not with academic achievement (i.e., GPA or scores on standardized tests). Finally, there is no evidence that C&C increases graduation rates within 4 years, but this program has demonstrated its capacity to keep students in school and keep them making progress (Sinclair et al., 2005).

It has also been shown that the C&C program outcomes vary greatly depending on implementation fidelity and context (Goulet, Archambault, Janosz, & Christenson, 2018; Heppen et al., 2018). Indeed, while C&C effects have been found to be greater when the program's components were implemented with high fidelity, contextual factors seem to support or hinder intervention efforts. For example, some authors showed that implementing C&C problem-solving interventions with high fidelity allows for a greater increase in student cognitive engagement (Goulet et al., 2018). Furthermore, the association between implementation fidelity and effects was found to be greater when mentors were adequately selected, rigorously trained, and when they could establish a larger support network for targeted students (Goulet et al., 2018; Heppen et al., 2018).

MULTILEVEL PROGRAMS

Many programs that aim to promote student engagement per se or as a way to prevent school dropout are multilevel, that is, they include universal, selective, and/or intensive-level interventions. *Careers Academies* (Kemple & Snipes, 2000) is a good example of such programs, as this universal intervention also comprises selective components. It targets high school students, and especially those who are at high risk of dropping out.

The principal goal of this program is to promote student engagement defined in terms of school attendance, by providing the students with work-related learning opportunities, and establishing pathways to facilitate the passage from high school to college or postsecondary employment. This program has three core elements: (1) a school-within-school structure in which students remain with the same group of teachers across a 3- or 4-year period; (2) a curriculum combining academic and vocational training covering different themes such as finance, health, communication, and technology; and (3) the development of partnerships between schools, local employers, higher education institutions, and communities as a way to provide students with career development opportunities, mentoring, financial support, etc. Results of a randomized controlled trial (Kemple & Snipes, 2000) indicated that, although students who presented the highest risk of dropping out were less likely to remain enrolled in a career academy through the end of grade 12, the high-risk students who remained in the program presented lower dropout rates and behavioral disengagement (truancy) as compared to their counterparts who did not participate. Yet, for students presenting a medium risk or low risk of dropout, involvement in a career academy was not associated with school perseverance or engagement (i.e., attendance).

The *Links to Learning* (L2L) is also a multilevel program implemented among fourth graders to favor their behaviors at home and in school, including their academic engagement. It includes two universal components implemented at the classroom-level, as well as intensive-level components for students presenting behavioral disorders. This program incorporates interventions delivered in the family as well as in classrooms by a team including a community mental health practitioner, a parent advocate, and teachers. The Good Behavior Game (a contingency-based behavior management program; Flower, McKenna, Bunuan, Muething, & Vega, 2014) and Peer-Assisted Learning (a tutoring reading intervention in which tutees who are less skilled readers are paired with tutors with stronger reading skills; Fuchs, Fuchs, & Burish, 2000) are both implemented universally by teachers. In addition, targeted students, their parents and teachers participate in more intensive interventions, in which parents and teachers fill out a daily report card to monitor behaviors and record reinforcement given to the child (Kelley & McCain, 1995). Moreover, teachers regularly send good news notes certificates to parents underscoring positive aspects of their children's behavior (Lahey et al., 1977). Finally, targeted families also participate in an 8-week family intervention (individually or in group) focusing on home-school communication, home routines, as well as homework and reading support. Individualized case management services are also offered to families upon request. The fidelity assessment (Atkins et al., 2015) of the classroom-based components of L2L showed that teachers implemented the universal strategies with higher fidelity (76%–80% fidelity rates) than they did the targeted ones (53%–56% fidelity rates). At the family level, although no information is available on parents' attendance for the family component of the intervention, most parents reported having spoken with the mental health provider or parent advocate at least a few times or many times (82% and 47% of parents). Moreover, parents reported that they had received home visits at least a few times (40%) or many times (18%). Results of the 3-year multimethod, multiinformant efficacy trial based on an experimental design indicate that the program had positive impacts on children's behavioral engagement, social skills, academic competence, on-task behaviors, and family use of mental health services.

The *Achievement for Latinos Through Academic Success* (ALAS; Larson & Rumberger, 1995) is another multilevel, selective, and intensive intervention. The initial intervention targeted two different groups of Latino high school students, one group of students who were formally identified by the school district as presenting learning disabilities or severe affective disturbances, and another group, the high-risk group, who were not identified by the district but who presented characteristics that differentiated them from regular students in their program and placed them at high risk. The goal of this 3-year intervention was to prevent school dropout by promoting student behavioral (i.e., participation and attendance), affective (i.e., bonding), and cognitive engagement (i.e., self-regulation through problem-solving), as well as their perseverance in school. The program uses a multifaceted approach and includes different strategies focusing on adolescents, their school, family, and community. The adolescent-focused component includes problem-solving, counseling, attendance monitoring, and enhancement of school affiliation. The school-focused components involve frequent teachers feedback to students and their parents via ALAS counselors, as well as attendance monitoring. The family-focused component connects families to community services and trains parents to help them develop skills to better participate in school, guide, and monitor their adolescent. Finally, the community component involves enhancing exchanges and collaboration among the community resources working with adolescents and parents as well as developing new strategies to facilitate the use of these services by the families. Based on an experimental design, the efficacy assessment of this 3-year program suggest that it yields positive impacts on many academic outcomes, such as credits earned, school perseverance, and behavioral engagement (lower absenteeism). Moreover, participants with learning disabilities, severe affective disturbances, or those at risk for other reasons presented lower dropout rates compared to similar peers from the control groups, and this gap was greater for students who were exposed to the program over a longer period of time.

Finally, the *Positive Behavioral Intervention and Supports* (PBIS) (Horner, Sugai, Todd, & Lewis-Palmer, 2005) is a three-tier multilevel (universal, selective, and intensive) intervention that can be implemented from kindergarten to grade 12. This 3-year school-wide program has four aims: to decrease the rates of punitive responses to student behavior problems, to increase students' behavioral engagement (i.e., decrease misconduct), to improve their academic achievement, and to strengthen school–family partnerships. At the universal level the program includes six main components: (1) fixing consensus-driven expectations for student behaviors, (2) teaching interpersonal skills to the students, (3) providing them with systematic reinforcement, (4) monitoring the intervention efficacy, (5) formulating discipline practices, and (6) reducing or eliminating the reactive punitive strategies school staff are using with students and replacing them with previously identified proactive ones. At the selective level the same components are important, but some students presenting more behavioral difficulties receive increased instruction and increased adult supervision in small groups. They also have more opportunities to practice with self-regulation and social skills, and for positive reinforcement and academic support [Positive Behavioral Intervention and Supports (PBIS), 2018]. Finally, students who exhibit important problem behaviors are exposed to the intensive level. Based on the same aforementioned guidelines, these students receive highly individualized support and interventions, such as function-based behavioral intervention, which is based on information obtained by observing antecedent and outcomes of student behaviors. Results of the experimental efficacy assessment indicate that the program has a significant impact on school safety and student reading performance. It also has a positive contribution on student behavioral engagement (i.e., lower rate of office disciplinary referrals); yet, this last finding remains limited, since no pretraining data were available for this outcome.

PROGRAMS SUMMARY

Overall, the programs that we identified differ based on their objectives and expected outcomes, length, and intervention components. Further, all programs do not align the same way with the general requirements associated with effective prevention and intervention strategies. The following section draws a summary of the 10 previously discussed programs based on these criteria.

Program Objectives and Expected Outcomes

In terms of program objectives, all programs that we selected aim at promoting student engagement per se, or as a way to reduce problem behaviors (e.g., substance use, internalizing or externalizing problems), enhance academic functioning, and prevent school dropout. Yet, two programs, *Bridges to High School* and *Career Academies*, also aim to facilitate transitions to middle school or college. Moreover, among programs promoting student engagement as a principal objective, the way engagement is conceptualized vary. For instance, the *Iowa Strengthening Families* and the *Bridges to High School* programs defined and measured engagement as a global construct, while all other programs have objectives and expected outcomes related to the specific dimensions of engagement (i.e., behavioral, affective, and cognitive). Moreover, most of these programs focus principally on the behavioral dimension of engagement through the assessment of indicators, such as school attendance or absenteeism, participation or misconduct, and persistence or withdrawal.

Conversely, few programs explicitly include the development of student affective engagement as the main objective. Yet, this aim remains often secondary or implicit in many of them (e.g., *Seattle Development Project*, *C&C*, *ALAS*), as they emphasize student interest, as well as the development of positive relationships with adults or mentors in school. Although the principal aim of these programs is not to promote student engagement per se, they have been shown to have positive effects on this outcome, and especially on students' affiliation or bonding with respect to school. The *Career Academies* intervention, which promotes the development of a diversified curriculum that is well aligned with students' interests, is a good example of a program that implicitly promotes students' affective engagement. Yet, there is no evidence that this program has an impact on this dimension.

Finally, the *RYPEN* and the *Collaborative Life Skill Program* are the only one targeting student cognitive engagement by intervening on student organizational and self-regulation skills (e.g., planning, revision). Overall, a closer look at the programs selected clearly highlights that the cognitive dimension of engagement is definitely the one that has been less put up front. Yet, the picture would have probably been different if we had also included classroom instructional interventions.

Program Length

Programs also vary importantly in terms of length. Some interventions (e.g., *RYPEN*, *Collaborative Life Skill Program*), are quite brief, that is, from 2 to 12 sessions. Yet, other programs extend over 2, 3, or even 6 years (i.e., *Seattle Social Development Project*). The various lengths of these programs probably have consequences on the long-term sustainment of their impact. Yet, since most of them did not make follow-up assessments, it was not possible to verify this claim.

Intervention Components

Selected programs have different components at different levels: (1) school and classroom, (2) families/parents, and (3) youths. Indeed, most interventions that have a universal focus (e.g., *Career Academies*, *PBIS*) either intervene on school organization (e.g., school-within-school; school-wide behavioral management system) or propose activities across the whole school on different themes (e.g., conduct management, social and interpersonal skills). Yet, like other programs (e.g., *L2L*, *ALAS*), they also propose to intervene at the classroom-level, by addressing facets of the classroom experience, such as classroom instruction and curriculum, proactive classroom management strategies, teacher monitoring and feedback to students, and activities promoting student learning and engagement, mostly at the behavioral or cognitive level.

A significant number of programs also include a family component. These interventions have different objectives, but many of them aim at increasing parents' knowledge about youth development or promoting the development of parental skills as a way to facilitate family cohesion, allow parents to better manage their children's behavioral disengagement, and reduce the possibility that their children adopt delinquent, risky behaviors (e.g., drug use). Lastly, many of these interventions also intend to help parents support their children academically and promote their engagement in school or to facilitate parents' access to different community services that could support them effectively in their parenting role.

Finally, with the exception of *Career Academies*, all programs include youth sessions targeting the improvement of their engagement in school, either directly or through the development of their skills or abilities. These group or individual intervention components focus on problem-solving, social skills development, or on the promotion of autonomy and stress management skills. They also enable youth to develop abilities to help them deal with negative peer influence or with parent or school demands. Many selective or intensive programs (e.g., *Collaborative Life Skill Program*, *C&C*, *L2L*, *ALAS*) also include a monitoring component. Through monitoring, teachers, counselors, or mentors closely monitor student engagement based on behavioral (e.g., attendance, classroom behaviors, homework completion, and participation) or cognitive indicators (e.g., work organization skills).

Alignment With Effective Program Requirements

Finally, although many programs in the field of student engagement do not meet the requirements previously mentioned to be considered effective, we can confidently state that the programs reported in our review do not suffer of such limitation. For instance, the programs that we chose are based on multiple components, incorporate training sessions for practitioners leading implementation, seem to be implemented with sufficient dosage, and have been evaluated rigorously. Moreover, they are based on clear, age-appropriate objectives, have solid theoretical foundations, and promote the development of positive relationships with students. Yet, many of these programs still present some limits. First, except for *C&C* and *L2L*, the fidelity and implementation processes of most programs—that is, correspondence between the program planned and implemented and the influential factors affecting the implementation fidelity (Rossi, Lipsey, & Freeman, 2004)—have not been reported and evaluated. Second, with the exception of certain programs that specifically target students from minority group populations (i.e., *ALAS*, *Bridges to High School*), most interventions do not state clearly whether they considered participant sociocultural background characteristics. Third, all selective and intensive programs, as well as many universal programs (except *Career Academies* and *PBIS*) fail to address school practices and organization—that is, organization of groups and of the school curriculum. This limitation restrains these programs' scope, as they either only reach a specific population (for selective or intensive programs) or target-specific classroom behaviors instead of focusing on student overall experience in school. To finish, although some intervention programs, such as the *Seattle Social Development Project* and *C&C*, have been implemented in the early school years, most programs are implemented quite late in the adolescent years. As a result, the effects of these programs on school graduation remain quite limited, especially when students' trajectory of disengagement is more firmly embedded and harder to change.

IMPLICATIONS FOR FUTURE RESEARCH

While many studies suggest that students present different patterns of disengagement and that those who eventually drop out vary in terms of risk factors, profiles, as well as in term of the intensity and nature of severe stressful life events they experience in the few months before they dropout (Dupéré et al., 2018; Janosz et al., 2000; Wang & Fredricks, 2014), there is still an important gap between the current knowledge that we have on student engagement and dropout and the way prevention and intervention programs are currently constructed (Freeman & Simonsen, 2015).

As a next step, there is thus a clear need to develop, implement, and evaluate multilevel prevention and intervention programs that consider the timing and heterogeneity of student disengagement trajectories leading to school dropout. While some of these programs need to start early, from the first years of schooling, efforts should also be made to target and intervene with older adolescents who experience severe stress or show signs of disengagement. Moreover, while authors have shown that children and especially adolescent internalizing difficulties could act either as an antecedent or as an outcome of student disengagement (Wang & Fredricks, 2014), there is a clear need to integrate specific objectives on youth internalizing problem prevention in broader, multilevel and/or multicomponent student engagement programs.

Compared to the other dimensions of engagement, the affective dimension is often at the lowest level or showing the steepest decline over time and, even for students who will eventually complete school (Archambault, Janosz, Morizot, et al., 2009). It is also well recognized as an important antecedent of student cognitive and behavioral involvement in school. Considering that and the fact that the promotion of student belongingness and interest in school is not often a main program objective, there is also a need now for research to develop effective prevention and intervention strategies that directly address this dimension of engagement.

Lastly, the fact that very few interventions have been evaluated using rigorous, quasi-experimental, or experimental designs is problematic. More worrying still, however, is the fact that, even in most programs that have been rigorously assessed, there is still no systematic check of intervention implementation fidelity. In other words, in most cases, there is no way to know whether there is a close correspondence between the key components of the program in theory and the intervention that has actually been implemented (Berkel, Mauricio, Schoenfelder, & Sandler, 2011). In most cases the implementation processes, namely the main individual, contextual, or environmental factors influencing implementation fidelity (Rossi et al., 2004), also remain unknown. As a result, it remains quite difficult to establish the program key ingredients that are effective, in what conditions, and for whom. Without a doubt, providing clear answers to these central questions is a necessary next step.

CONCLUSION

In the last decade, researchers have invested major efforts into understanding how student engagement in school develops, under what circumstances, so as to better understand the resulting consequences. Although there is still much work to be done, we now know much more about the processes leading some students to disengage and dropout. Effective and efficient programs favoring student engagement for its own sake, or as a means to promote youth positive development and school completion, are also quite numerous. Yet, the gap between what we know about the student disengagement process and what we are currently doing to prevent it is far from ideal. A better balance between the theoretical understanding of the construct and the interventions, mechanisms, and contexts promoting student engagement would ultimately lead to a better, more adjusted answer to students' individual needs, as it would also enable a better fit between these student needs and the ever-increasing demands of their school environment. By developing rigorous research-based interventions that respond appropriately to students with various individual, socioeconomic, psychosocial, and family characteristics, researchers and practitioners can certainly collaborate to support schools in their mission of preparing and empowering the next generation.

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