School Belonging and Student Engagement: The Critical Overlaps, Similarities, and Implications for Student Outcomes

Kelly-Ann Allen and Christopher Boyle

Abstract

The theoretical and empirical literature has long included belonging as central to student engagement. Some conceptualizations and approaches have suggested that a student's sense of belonging is a central and foundational principle underpinning engagement. Engagement also contributes to a sense of belonging. Two distinct literatures have developed insights around the importance of, pathways to, and outcomes associated with each construct. This chapter narratively explores similarities and differences between belonging and student engagement, identifying areas of overlap as well as helpful distinctions, with implications for research and educational practice. Although the two are closely connected, these two friends are more effectively treated as complementary constructs, both of which are essential components for positive development in young people.

K.-A. Allen (✉)
School of Educational Psychology and Counselling, Faculty of Education, Monash University, Clayton, Australia

Centre for Wellbeing Science, Melbourne Graduate School of Education, Melbourne University, Parkville, Australia
e-mail: Kelly-Ann.Allen@Monash.edu

C. Boyle
School of Education, University of Adelaide, Adelaide, Australia
e-mail: chris.boyle@adelaide.edu.au

School Belonging and Student Engagement: The Critical Overlaps, Similarities, and Implications for Student Outcomes

The controversial "Two Pretty Best Friends" meme began when Jordan Scott (also known as @jayrscottyy) recorded a video post and posted it on the social media platform TikTok (www.tiktok.com). The well-connected Scott shared a cryptic phrase: "I ain't ever seen 2 pretty best friends, always one of em gotta [sic.] be ugly." The words quickly became a meme that went viral, spreading across various social media platforms. The saying could imply that two things of equal beauty rarely work together side by side.

Although the meme was met with significant backlash, to some degree, this modern saying resonates with psychological research around assets and deficits. To justify relevance, positive psychological assets are often contrasted with negative psychological deficits. For instance, engagement in learning is contrasted with boredom. Happiness is contrasted with mental illness. Belonging and prosociality are contrasted with loneliness and antisocial behavior. But can two pretty best friends walk hand-in-hand?

© The Author(s), under exclusive license to Springer Nature Switzerland AG 2022
A. L. Reschly, S. L. Christenson (eds.), *Handbook of Research on Student Engagement*,
https://doi.org/10.1007/978-3-031-07853-8_7

This chapter highlights one example of two pretty best friends: belonging and engagement. At times these are viewed as the same construct; at other times one is seen as critical to the other, or they are competing priorities for the limited time and resources within schools. Extensive research indicates that student engagement and school belonging matter (e.g., Korpershoek et al., 2019; Li, 2011; St-Amand et al., 2017). Voelkl (2012), in the first edition of the *Handbook of Research on Student Engagement*, reviewed the role of school identification in influencing the social and learning behaviors of students. The assumptions were that school identification mainly involves emotions rather than cognitions, consists of a specific set of attitudes which ultimately define student behavior at school, and takes time. It is worth noting that the focus of Voelkl's (2012) perspective drew from Finn's participation-identification model (Finn, 1989). Despite the model being represented as a relatively simple two-component model, it afforded engagement dimensions to be grouped into either those which involve behavior (participation component) or those which relate to emotions (identification component). According to Voelkl, student identification was likely to influence social as well as learning behaviors in a way that was yet to be clarified.

In the framework proposed by Voelkl (2012), two main components of identification in Finn's model, namely belonging and valuing, were first introduced. With belonging set to be defined later in this chapter, here it suffices to mention that this first component has been recognized as a basic human necessity which needs to be fulfilled. As students strive to fulfill their need to belong, they form relationships with teachers and peers and may even become active participants in school activities, including academic work. When students succeed, their achievements not only become a source of motivation but also encourage positive behavior which, in turn, can further improve academic performance. Similarly, people have a need to feel that they are of value. Within the school context, *valuing*, the second component of Finn's model, can be either of personal importance, where students show interest and enjoyment from school tasks or satisfaction at good grades, or of practical importance (i.e., recognizing that schools are important to obtain good qualifications or to secure a good job). In this case, by building on well-established theories as well as empirical data, Voelkl pointed out that efforts, engagement, and persistence in learning were more likely to be observed when students value school work, with academic success also more likely to follow. Hence, giving high importance to certain tasks can be a major source of motivation.

Considering the assumptions of the proposed framework by Voelkl (2012) in the previous edition of the Handbook, it was assumed that once school identification was achieved (i.e., the need for belonging and valuing were fulfilled), students would be more engaged and have more positive attitudes toward school, with the latter eventually shaping student behavior in a positive manner. Voelkl's (2012) framework, therefore, seeks to make clear that school identification is "an intrinsic form of achievement motivation that encourages students to engage in appropriate learning behaviors" (Voelkl, 2012, p. 194), however, it was also recognize that positive behavior was not a spontaneous process. That is, when students enter schools, they already have certain feelings toward school as well as some early forms of behavior. But as they progress through different grades, the action of external motivators, such as specific behaviors being imposed or encouraged by parents and teachers (e.g., learning, doing homework), may reinforce certain attitudes. Eventually these students, especially those with an increased sense of belonging and those who give value to academic activities, adopt these externally motivated behaviors as their own, which turn into a form of intrinsic motivation. In fact, this whole process may be encouraged by certain school conditions such as a safe environment or a supportive classroom, which are referred to as "contextual facilitating conditions." Taken together, it can be said that the main concept behind Voelkl's proposed framework was to consider school identification and student engagement mainly in terms of emotions generated through school experiences (i.e., emotions produced by a feeling of connectedness with the

school, or felt when successfully completing tasks which are believed to be important).

In this chapter, a different approach is used where school belonging and student engagement will be viewed as distinct and independent constructs that intertwine and complement one another. As such, this chapter narratively synthesizes theory and research on belonging and engagement, including historical considerations, examination of terminology, definitions, theories, and frameworks appearing in the literature in order to identify areas of similarity and distinction. As a whole, our review illustrates that belonging is very much needed for engagement and vice versa. For the sake of educational outcomes, the two constructs of belonging and engagement are indeed best friends that together should be emphasized in schools, not viewed as competing. We conclude with implications for research and educational practice.

Beginning with Belonging

The need to belong is considered to be a universal need which is innate and common to most human beings (Allen, 2020a; Allen, Kern et al., 2021). Although a sense of belonging is, in a general way, important to the social lives of people, it is particularly valuable within a school setting (Allen & Kern, 2017, 2019). School belonging has been recognized by many researchers as being associated with academic motivation and positive school outcomes such as participation in extracurricular activities and school attendance (Anderman & Freeman, 2004; Irvin et al., 2011; Shochet et al., 2011). Interestingly, such positive associations can even be found for students across different grades, thereby further indicating that school belonging is an important component of students' school lives (Korpershoek et al., 2019). Despite its importance in education, school belonging has been studied and defined in numerous ways (Allen & Bowles, 2012; Libbey, 2004; O'Brien & Bowles, 2013). Allen and Bowles (2012) described the field of school belonging as "unsystematic and diluted" (p. 108) due to disparities in definition and terminology.

Despite the absence of a universal definition for school belonging, St-Amand et al. (2017) identified three key attributes of school belonging. First, it is a major factor which contributes to the psychological development of an individual in a positive way. This has also been recognized by other researchers who have pointed to findings that school belonging is essential for personal identification and a social identity—which are key development processes of adolescence (Allen & Bowles, 2012; Verhoeven et al., 2019). The second key attribute of a sense of belonging is that it is a basic need that leads to social bonding between people as well as affiliations with members of a group (Hagerty et al., 1996). This attribute, explained in the specific context of school settings by Langevin (1999), emphasises the importance of social relationships in both the formal and informal aspects of school life. Similarly, while suggesting that friendships are important components of belonging, Williams and Downing (1998, p. 103) state:

> Students thought that being a part of the class meant that they had a place in the classroom, felt welcomed, wanted, and respected by their classmates and teachers. Being familiar with their classmates and having friends who understood them made the student feel as if he or she belonged to a group and/or to a class as a whole.

The final defining attribute involves four key terms or characteristics which clearly differentiate school belonging from other concepts: positive emotions, positive social relations, involvement, and harmonization (i.e., "individuals must adapt and adjust by changing personal aspects to align with any situations or people" St-Amand et al., 2017, p. 109). Altogether, these defining features and characteristics not only help to better define school belonging but also to identify its main components so as to develop more accurate means of measuring the concept.

School or Student Engagement

School engagement and student engagement are terms that have become widely used in educational settings. Before proceeding, it is worth not-

ing that although the two terms are often used interchangeably, they may actually refer to two distinct concepts. In this context, Appleton et al. (2008) noted that the former places emphasis on the importance of school contexts, hence the name school engagement. On the other hand, since the focus of student engagement is on an individual, it takes into account the psychology, behavior, and academic achievement as well as the influence of families and friends on the students. However, for the purpose of this work, despite prior distinctions, the two terms will be used interchangeably or referred to as the general term "engagement." The concept of engagement is intricately linked to that of school belonging. It refers to "students' expression of opinions or attitudes and behaviors" (Wonglorsaichon et al., 2014, p. 1749). However, Bakadorova and Raufelder (2017), basing their definition on the work of previous researchers, have provided a more comprehensive definition of school engagement as being that of a complex and multidimensional construct consisting of two or three components, namely:

- *Behavioral engagement*—involves active participation in school-related activities (both curricular and extracurricular), good conduct and absence of disobedience to school regulations (Engels et al., 2016; Finn, 1993; Skinner & Belmont, 1993).
- *Emotional engagement*—refers to students' relationships and emotions toward their peers, academics, and the school in general (Skinner, Kindermann, & Furrer, 2009), thereby allowing students to identify themselves with their schools (Finn, 1989; Skinner & Belmont, 1993).
- *Cognitive engagement*—[also referred to as "psychological investment"] where students display learning motivation and are willing to put in the required efforts to learn or develop their own learning process, especially when new or complex ideas are concerned (Fredricks et al., 2004; Newmann et al., 1992).

More recently, the inclusion of a fourth component known as *agentic engagement* was proposed (Dincer et al., 2019; see also Reeve & Jang, chapter "Agentic Engagement", this volume). According to Reeve (2013), it refers to the active and constructive contributions demonstrated by students during the learning process. However, it is also recognized that more research is needed in order to determine whether it is, indeed, a distinct concept, which has different predictive value when compared to the three components of engagement (i.e., behavioral, emotional, cognitive) (Eccles, 2016). From this definition, it is clear that engagement can play an important role in influencing students' achievement. Indeed, as pointed out by Lippman and Rivers (2008) who described similar components, school engagement can improve academic performance and promote attendance in school while inhibiting risky or negative youth behaviors. However, it would be remiss not to point out that this concept was not always recognized as a valuable part of youth development. This is described by Li (2011) who stated that although it was known that children's enthusiasm for learning deteriorated as they went through the school system—elementary to middle to high school (Skinner, Kindermann, Connell, & Wellborn, 2009; Wigfield et al., 2006)—this reduced motivation was mostly attributed to undesirable behaviors such as smoking, drinking, drug use, unsafe sex, teenage pregnancy, and violence among young people. As such, a great deal of research focused on preventing these negative behaviors from manifesting so as to ensure a smoother transition through students' lives. Eventually, it became clear that this simplistic view was limited and not cognizant of the wider issues of school belonging and engagement. Active school contributions through school engagement is now a widely accepted possible solution to decreasing academic motivation and achievement (Bosnjak et al., 2017; Chodkiewicz & Boyle, 2016; Fredricks et al., 2004).

A Definitional Overlap

Although the two terms of school belonging and student engagement are clearly distinguished, they are intricately linked to each other. Indeed,

the two concepts often overlap at different levels whether in terms of definitions, constructs or the measures used. For instance, some definitions of school engagement are still akin to descriptions of school belonging and, therefore, it is not surprising to note that the two terms have been used interchangeably in some research (O'Brennan & Furlong, 2010), with disengagement being used to describe not belonging to school (Willms, 2000). Moreover, in The Organisation for Economic Co-operative Development (OECD)'s Programme for International Student Assessment (PISA) report, Willms referred to school belonging as:

> A psychological component pertaining to students' sense of belonging at school and acceptance of school values, and a behavioral component pertaining to participation in school activities . . . the term disengaged from school is used to characterize students who do not feel they belong at school and have withdrawn from school activities in a significant way (Willms, 2000, p. 8).

Similarly, when considering the individual components of engagement, it will be noted that the concept of emotional engagement, as defined before, encompasses students' relationships and emotions toward their peers and teachers and, therefore, it is concerned with feelings toward the school or school characteristics in general (Skinner, Kindermann, & Furrer, 2009). According to Sciarra and Seirup (2008), this feeling represents a form of care for the school and can be translated into a feeling of belongingness. As such, it is not surprising that this has led Korpershoek et al. (2019) to consider both terms (school belonging and emotional engagement) to be similar, at least in the way in which they have been conceptualized. In fact, as it will be noted later, it is this similarity between belongingness and emotional engagement which is often highlighted when considering how the two terms overlap, although to some extent, similarities with behavioral or cognitive forms of engagement may also be observed.

Furlong et al. (2013) tried to disentangle the overlap between school belonging (and its regular synonyms of school connectedness, school bonding, sense of school membership) and school engagement. In their research, they present the notion that there are two types of engagement that explains why sometimes school belonging and school engagement are used to mean the same construct. Furlong et al. (2013) proposed that the first type of engagement used by researchers relates to academic outcomes and the second type relates more to the affective state and relationships which a student experiences—the latter being more akin to school belonging.

Furlong et al. (2013) also focused on the behavioral aspect of school belonging and engagement by considering a gratitude component as being highly influential in affecting the cognitive component such as self-esteem. Gratitude is a crucial aspect of belonging where both teachers and students can appreciate the roles that others play in the school environment, thereby understanding that engagement can be seen in the effort of others. This can increase social cohesion and "...teachers can encourage appreciative responding in students by emphasizing and reinforcing kind acts in the classroom, and teachers and staff can model reciprocity and thankfulness in coordinated activities with students" (Furlong et al., 2013, p. 71). Understanding the roles that school staff plays in the school and how much commitment is invested is crucial to being able to appreciate the gratitude component. If gratitude is used well, it could facilitate a place where young people feel valued leading to a greater sense of belonging benefiting all members of the school community. Furlong et al. (2003) are straightforward and suggest that engagement is over a long rather than short period and if used appropriately it is about "...inoculating students against the consequences of poor school bonding" (p. 111).

Theories and Frameworks

Models and Frameworks of School Engagement

School engagement is undoubtedly an important factor that influences a student's academic achievements, thereby exerting a direct influence on his or her school career (Appleton et al., 2008;

Fredricks et al., 2004). As such, this concept has been widely investigated by different researchers who eventually came up with different models or theoretical frameworks in order to gain a better understanding of school engagement as well as ways through which it could be fostered. However, through these frameworks, school engagement is not only regarded as the final objective but also as a means of promoting or predicting positive outcomes (e.g., high academic achievement) or preventing negative ones (e.g., school dropout) (Frydenberg et al., 2005; Ryan & Deci, 2009). Li (2011) identified four key frameworks of engagement which can be applied within the school setting. An overview of these models indicates that they are often derived from general theories but each focuses on constructs which attempt to explain how certain variables influence school engagement in general or its individual components (i.e., behavioral, emotional, or cognitive engagement). Hence, a common feature of engagement models is that they consider school engagement as malleable and that, by identifying its predictors, engagement can be promoted.

School Reform and Motivational Models

According to Finn and Zimmer (2012), one of the earliest models recognizes that school engagement is influenced by the school setting. Based on this, Newmann (1981) suggested that only important reforms to those settings could lead to an increase in school engagement and for this purpose, six possible changes or guiding principles were proposed. This concept was later taken up by Wehlage et al. (1989) who also advocated the need for school reforms, but instead of promoting engagement, these reforms were viewed as a means of preventing dropouts. However, it should be noted that in order to implement reforms, prior knowledge of the type of school settings which influence engagement is required. In this context, Fredricks et al. (2004) noted that the school settings being referred to in this model can be of two types. First, they can occur at the school-level which basically represents certain school characteristics that can alter school engagement. For instance, in one historical study, it was found that schools of small sizes provided students with more opportunities to participate in extracurricular activities while developing social relationships (Barker & Gump, 1964). Similarly, in terms of school practices, it was assumed, despite conflicting results, that adopting fair and flexible rules could decrease risks of disengagement (Finn & Voelkl, 1993; Natriello, 1984). Therefore, educational reforms should occur beyond the classroom and school leadership should have a central role.

The classroom context, itself, is a multidimensional construct involving different components which can broadly be classified as being organizational, instructional, or social (Dotterer & Lowe, 2011). In the case of classroom structure, this refers to the expectations which teachers have regarding the social and academic behavior of students, the extent to which these expectations are made clear and the establishment of rules or norms which are applied when these expectations are not met (Connell, 1990; Fredricks et al., 2004). Although not many studies examine the link between classroom structure and engagement, evidence has shown that clearer expectations and work rules were positively associated with higher cognitive, emotional and behavioral engagement, with the latter being especially visible in the form of less disciplinary issues (Connell & Wellborn, 1991; Doyle, 1986; Fredricks et al., 2002).

The concepts of autonomy support and task characteristics are identified as potentially increasing engagement in the classroom environment. According to researchers, autonomy is supported when students are offered the opportunity to choose and participate in decision-making processes while not being pressured into doing schoolwork or displaying good behavior by control measures such as rewards and punishments (Connell, 1990; Deci & Ryan, 1985). Although such conditions are believed to enhance engagement, only limited research has examined this link (Connell, 1990). For instance, it was observed that students from elementary schools showed higher levels of cognitive engagement when provided with the opportunity to choose the

type of tasks which they wished to do as well as the place and time to perform them (Perry, 1998; Turner, 1995). However, in a different study, the same link between autonomy support and engagement was not visible for junior high school students. However, it should be noted that in that study the authors identified the lack of more opportunities and the presence of more control measures as possible reasons for these observations (Midgley & Feldlaufer, 1987; Moos, 1979).

As far as task characteristics are concerned, it is worth noting that, within the classroom context, repetitive tasks or those based on memorization strategies are considered to be common, but they are ineffective in developing cognitive engagement as they involve less effort or learning commitments from the students (Newmann et al., 1992). As a result, Newmann proposed changes by suggesting five characteristics which were needed for tasks to be engaging (e.g., authentic tasks, tasks which allow students to be autonomous in terms of conceptualization, execution, and evaluation, tasks which allow students to collaborate, tasks which allow students to express different types of talents, and tasks which provide opportunities for fun) (Newmann, 1991; Newmann et al., 1992). Some of these features were investigated, with one study showing that students who collaborated with their peers on new but personally meaningful tasks were more likely to use certain gestures, expressions, and behaviors which were indicative (linguistic and behavioral indicators) of higher cognitive engagement (Helme & Clarke, 2001). Similarly, higher cognitive engagement was observed when students received teachers' support and encouragement after being given complex tasks to complete (Blumenfeld & Meece, 1988). Although the last two characteristics are not often the subject of studies, the results clearly show which type of tasks are likely to sustain student engagement and, in doing so, they not only support the hypothesis regarding the importance of task characteristics but also highlight the value of relationships (with peers and teachers). This leads us to the third component of the classroom context which is its social aspect.

As evidenced by the large body of literature, social relationships in classrooms are arguably one of the most studied concepts as far as engagement is concerned. These studies also include the influence of peers in shaping the engagement levels of students. Research, in this case, has been focused on the predictive effects of peer acceptance, with results demonstrating both higher emotional (e.g., satisfaction at school) and behavioral engagements (e.g., prosocial behaviors, pursuing academic goals) for students who felt accepted by their peers (Berndt & Keefe, 1995; Wentzel, 1994). This was especially evident if the group already involved highly engaged individuals (Kindermann, 1993). However, peer rejection is also a reality, and it is not surprising that it was shown to lead to opposite effects in the form of reduced levels of both types of engagement as well as higher risks of dropout (Buhs & Ladd, 2001; DeRosier et al., 1994; French & Conrad, 2001). After peers, the influence of teachers in the form of teacher support is another factor which shapes student engagement within classrooms. The effects of supportive teachers have been positively associated with all forms of engagement, namely, behavioral, emotional, as well as cognitive (Battistich et al., 1997; Blumenfeld & Meece, 1988; Croninger & Lee, 2001; Skinner & Belmont, 1993) and the fact that these results were consistent not only for students from elementary up to high schools but also across different ethnic groups further shows the importance of this factor (Marks, 2000). Furthermore, in addition to creating a socially supportive environment, it will be recalled from earlier descriptions, that teachers play a central role in supporting students' autonomy, creating appropriate task characteristics as well as providing clear classroom structures. Hence, they are arguably the most important component of all the previously described factors within the classroom context. Overall, it can be said that there is enough evidence to show that school characteristics influence student engagement, thereby supporting the reform model.

Closely related to the reform model is that of Connell's self-system theory (Connell, 1990; Connell & Wellborn, 1991). According to this

model, children have three basic psychological requirements, namely, the need for competence, the need for autonomy, and the need for relatedness, with the level of school engagement being dependent on the extent to which students feel that those needs are being fulfilled. This direct link between students' needs and engagement levels is widely accepted by researchers but interestingly, as pointed out by Fredricks et al. (2004), the self-system model also takes into account the continuous influence of contextual factors, that is, the social environment within which students evolve and which was described in the previous model. Therefore, while acknowledging the influence of those social factors on school engagement, this model also stipulates that the fulfillment of students' needs act as the link between the two. For instance, in one study it was found that teachers considered students to be more engaged when they thought they shared a high-quality emotional relationship (a measure of high relatedness) (Connell & Wellborn, 1991) and this relatedness was itself more likely to occur when a supportive and caring environment was provided both by the teachers as well as peers.

Similarly, in another study, relatedness was found to be linked to emotional engagement (Furrer & Skinner, 2003), with Ryan et al. (1994) suggesting that the behavioral component of engagement could also be involved. In terms of the second need, that of autonomy, Ryan and Connell (1989) described it as students' "desire to do things for personal reasons, rather than doing things because their actions are controlled by others" (p. 81) and it is believed that in cases where students can contribute to decision-making processes or have the freedom to make choices, this need for autonomy is fulfilled, hence leading to a higher level of school engagement (Connell & Wellborn, 1991). As an example, many studies have reported that performing activities out of pleasure or interest (considered to be autonomous reasons) was positively linked with both emotional (e.g., happiness) and behavioral (e.g., higher participation) engagement (Connell & Wellborn, 1991; Patrick et al., 1993). However, unlike the need for relatedness, there are no studies which examine the above assumption that social contexts can contribute to engagement by supporting autonomy (Fredricks et al., 2004).

A similar observation can be made regarding the need for competence which is met when students start to believe that they control their own success while believing in their own abilities to succeed and understanding the means to attain it. Again, despite evidence of the link between perceived competence and engagement (Rudolph et al., 2001; Skinner et al., 1990), no studies have examined the involvement of factors such as school structure in fulfilling that need for competence. There is no doubt that further research is, therefore, required in order to find more evidence which supports the self-system model. Nevertheless, it can be concluded that, through the conceptualization of needs, this model has the merit of explaining why engagement is promoted under certain social contexts.

It is worth noting that the concept of needs is not necessarily exclusive to the self-system model. Similar constructs can be found within the motivational model (Li, 2011), itself based on the Self-Determination Theory of Ryan and Deci (2000). As the name suggests, compared to the previous model, the only difference is the inclusion of the concept of motivation. Hence, in this case, the model stipulates that the fulfillment of the psychological need determines the quality of motivation which eventually influences the level of school engagement (Eccles, 2004). Motivation, in this case, is regarded as an important intermediate requirement for engagement (Saeed & Zyngier, 2012) and this is observed not only in the fact that highly motivated students tend to perform better at schools (Pintrich, 2003), but also that it is considered to be one of the most important factors which need to be targeted by teachers in order to improve learning (Williams & Williams, 2011). While motivation is clearly a useful way of measuring engagement levels, it is not considered in the self-system model. In the same way, the motivation model excludes the influence of social contexts. As such, it is not surprising to note the proposal of a more general one, the self-system model of motivational development (SSMMD), in an attempt to reconcile the

two (Nouwen & Clycq, 2020), as through this integrated model, engagement can be visualized both in terms of the motivation processes and the continuous interactions with social contexts (Fig. 1).

Participation–Identification Model

A second model which is commonly applied in the engagement literature is Finn's participation–identification model (Finn, 1989). According to this theory, the first step in building success is when a willing student starts to participate in school activities which basically are classified into four main types, namely, social tasks, class-related initiatives, extracurricular activities, and responsive behaviors (Archambault et al., 2009; Finn & Zimmer, 2012). Participation in any of these activities are considered to reflect different levels of a student's engagement, thereby suggesting that, based on this model, the development of behavioral engagement is the first requirement for success. While continuous participation is believed to lead to some form of academic success, it may also subsequently lead to a form of school bonding, that is the identification part of the model which actually reflects a student's emotional engagement (Finn & Zimmer, 2012). Eventually, being cyclic in nature, these types of interactions can encourage further participation, success, and bonding. However, the converse is also true and, therefore, Finn's participation–identification model explains school dropouts as being due to a lack of encouragement in the early participation in school activities which will gradually lead to disengagement. This model is depicted in Fig. 2.

Models and Frameworks of School Belonging

Despite the importance of school belonging for healthy psychological development of students, very few models or frameworks provide guidance on the best ways to support or encourage school belonging (Allen et al., 2019; Allen, Vella-Brodrick et al., 2016; Libbey, 2004). Allen, Vella-Brodrick and colleagues (2016) found that some frameworks had been previously developed (e.g., Brendtro et al., 2002; Connell & Wellborn, 1991; Malti & Noam, 2009; Ryan & Deci, 2000) but these were of limited focus. Thus, they ignored the contribution of certain factors or did not consider the concept as a multidimensional construct based on empirical evidence (e.g., Rowe et al., 2007; Waters et al., 2009). Hence a new framework was proposed based on Bronfenbrenner's (1979) ecological framework for human development, whereby school belonging was viewed as a "multilayered socio-ecological phenomenon" (Allen, Vella-Brodrick et al., 2016), not dissimilar to Anderson et al.'s (2014) adaptation for inclusive education. In Allen and colleagues' approach, children are considered to be at the center of a broader system, surrounded by multiple layers of influence (the microsystem, mesosystem, exosystem, and macrosystem), which interact to shape development and psychosocial adjustment (Allen, Kern et al., 2016; Allen, Vella-Brodrick et al., 2016), as depicted in Fig. 3. This framework, unlike others which are only based on constructs involving an individual, is not only concerned with the importance of social relationships but it also takes into account other variables such as ecological, environmental, or even physical factors which are likely to influence a student.

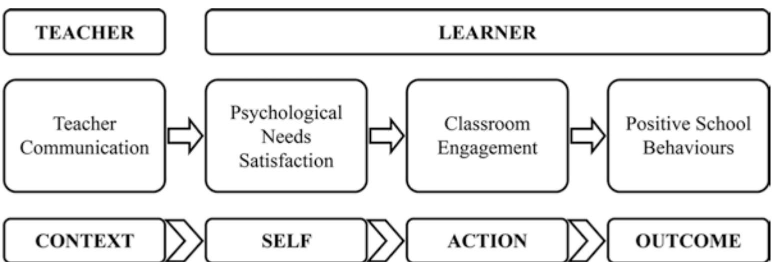

Fig. 1 The self-system model of motivational development (SSMMD) (Source: Dincer et al., 2019)

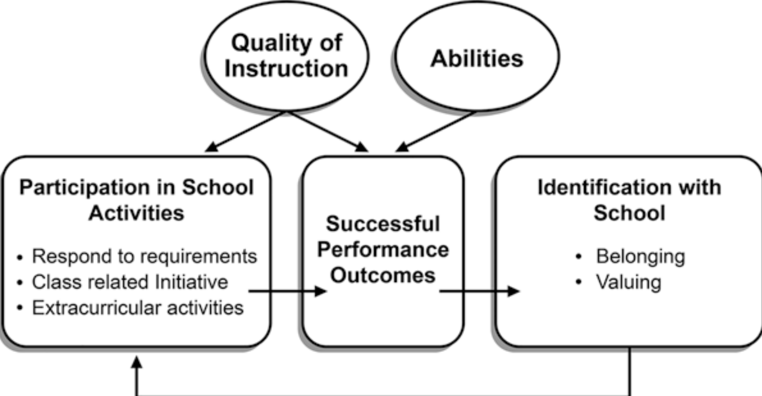

Fig. 2 The participation–identification model as conceptualized by Finn. (Source: Finn & Zimmer, 2012)

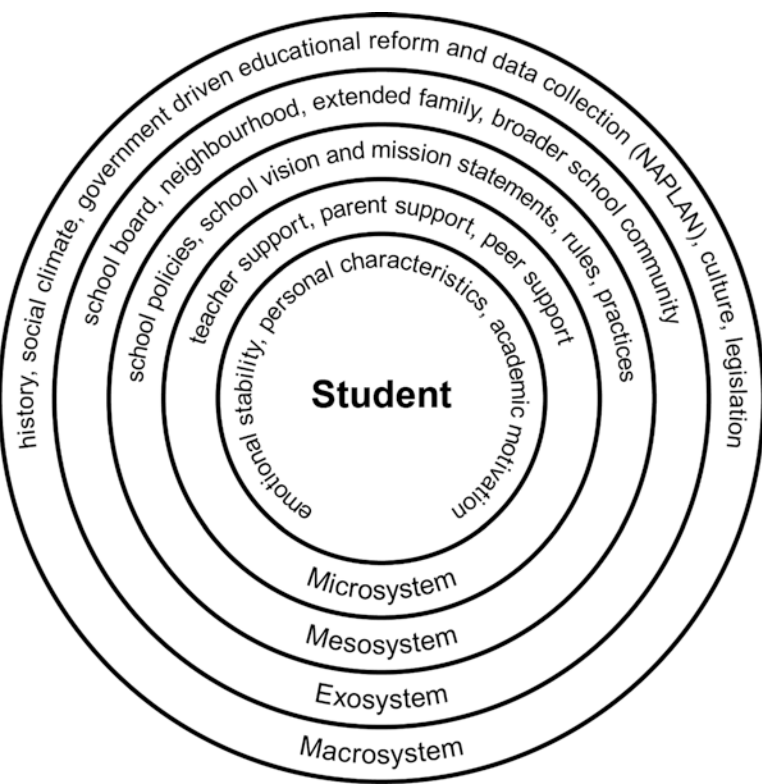

Fig. 3 The socio-ecological model proposed by Allen et al. 2016 for school belonging (Source: Allen, Vella-Brodrick et al., 2016)

Such a multilayered framework, therefore, provides different levels at which decision-makers such as educators, school leaders, and school psychologists can choose to intervene in order to improve school belonging. Additionally, this framework provides a means of organizing and categorizing research results according to the levels to which they apply in order to determine those which deserve more focus.

Closely related to the above framework is the rainbow model of school belonging (see Allen, 2020b). This model visually captures seven systems concerned with school belonging: a student's individual characteristics, primary social groups, the school climate, the local village, the environment, the culture, and the ecosystem. These systems clearly resemble the different levels of the socio-ecological framework. However, this model also possesses some unique features

which make it particularly useful for portraying the concept of school belonging. For instance, the rainbow is a spectrum of colors which reflects the spectrum of belonging. The different layers might be brighter or lighter, depending on how much influence that layer has. On some days, the feeling of belongingness can be intense and this can be visualized by the rainbow range moving from the rainclouds (low sense of belonging) to bright sunshine (high sense of belonging). Experiences of belonging to school are unique to the individual—just like each rainbow is unique (e.g., different sizes, times, and places). Among its other features, the rainbow model also reflects the bi-directional nature of the influences exerted by each layer. Finally, the final outcome of belonging can also be conceived in the form of the pot of gold under the rainbow as school belonging is positively associated with a range of good outcomes for students who last well into adulthood. At the same time, since it is not possible to have rainbows without rain, challenges and stressors which can hinder belongingness are appropriately represented by the clouds.

Overlaps and Similarities of School Belonging and Engagement

Apart from their definitions, the two concepts are related at the framework level in that they both attempt to achieve the same result of academic success. Unlike previous theories where school belonging and engagement were viewed as empirical constructs (i.e., as measurable or dependent/mediating variables which would explain observations or theories), they are now considered as outcomes in their own right (i.e., they are themselves a product of the interaction of different factors). Hence, they are both recognized as objectives which need to be targeted in order to attain that result (Bouchard & Berg, 2017; Fredricks et al., 2004). Furthermore, the different models used for each concept take into account the continuous influence of several external variables to explain the dynamic nature of school belonging and engagement. In this case, overlap of the two terms is obvious not only in similarities in terms of the variables but also in the constructs used to define the relationships between those variables and the two concepts.

For instance, let us consider the socio-ecological framework for school belonging. A closer view of the different layers described by Allen, Vella-Brodrick et al. (2016) suggests that the proposed framework is based on constructs which can also be found in the concept of school engagement. This is especially obvious for the innermost layer—the individual, which basically focuses on the factors which are specifically related to a student and which are likely to influence his or her sense of belonging. At this level, three major individual factors can be identified although it is noted that the contribution of "demographic characteristics" as a fourth factor, also have been mentioned (Allen, Kern et al., 2016). This may be due to the fact that characteristics such as gender, race, or even ethnicity have been reported to influence a sense of school belonging (Bonny et al., 2000; Sánchez et al., 2005). However, for this chapter, the focus will be mainly on the main three factors as they represent those which are most related to the concept of school engagement.

One of the attributes which is influenced by a sense of school belonging is academic motivation which Libbey (2004) describes as the "extent to which students are motivated to learn and do well in school" (p. 278). The importance of this factor was reflected in the study by Neel and Fuligni (2013) who found that the feeling of being connected to the school was positively associated with higher levels of academic motivation. Interestingly, as previously discussed, this concept of motivation is also often associated with school engagement, especially in the motivational model or its most recent alternative the self-system model of motivational development (SSMMD) (Nouwen & Clycq, 2020). Furthermore, the earlier definition of school engagement in this chapter is that one of its components is cognitive engagement whereby young people display a willingness to learn which is referred to as "psychological investment." Many authors, in their definitions of school engagement, have recognized this investment as being

important to learn, master, and understand the knowledge and skills taught at schools (Newmann et al., 1992; Wehlage et al., 1989). Based on the descriptions of these authors, Fredricks et al. (2004) rightly pointed out that the psychological investment had similarities with the concept of motivation, especially with specific constructs such as motivation to learn as it is this which allows students to value learning and inspires them to make the necessary efforts for this purpose. This similarity was further highlighted in a report where the terms engagement and motivation were used interchangeably (National Research Council and Institute of Medicine, 2004), with some researchers even suggesting that engagement was a form of motivation (Wigfield et al., 2006). Hence, while school belonging is considered to be one of the greatest sources of motivation (Fiske, 2004), the latter can itself be a measure of school engagement levels, thereby acting as a common link between the two concepts. Moreover, it is worth pointing out that motivation, as conceptualized in the different models of engagement, is believed to be an intermediate psychological state which will not only determine the level of engagement but which is itself dependent on a number of external variables such as contextual factors (Dincer et al., 2019). As such, it is not unlikely that those same factors or models could also be applied to explain school belonging through motivational constructs.

The other two factors which influence school belonging at an individual level are personal characteristics and emotional stability (Allen, Vella-Brodrick et al., 2016), with the latter also referred to as negative personal factors in a different review (Allen, Kern et al., 2016). The first one is concerned with the specific nature of students such as their personal qualities (e.g., coping and problem-solving skills) or social and emotional characteristics (e.g., ability to control behavior and emotions when faced with stresses or being friendly and getting along with peers and teachers). On the other hand, emotional stability mostly involves the absence of mental illness or other negative factors such as persistent anxiety, depression and negative emotions (e.g., sadness and gloomy) as in many studies, these were found to be linked to a low sense of school belonging (McMahon et al., 2008; Shochet et al., 2007; Shochet et al., 2011). Again, these two factors, despite being considered in the context of school belonging, also show some degree of overlap with school engagement. More specifically, the similarity occurs with reference to the emotional engagement component which has been described as "students' affective reactions in the classroom" (Connell & Wellborn, 1991; Skinner & Belmont, 1993). As such, emotional engagement involves a wide range of emotions which, in the context of school belonging, is considered as part of a student's emotional stability. This is probably why authors such as Finn (1989), in describing emotional engagement as identification with school, also defined belonging as one of its dimensions. To a lesser extent, some overlap also occurs with the behavioral component of school engagement since one of the three definitions provided by Fredricks et al. (2004) involves positive behavior as well as the absence of disruptive conduct and both of these, being a student's personal characteristics, are recognized as important variables within the socio-ecological framework of school belonging.

Similarity with emotional engagement can also be observed for the second layer of the framework. For this level, referred to as the microsystem (Fig. 3), the focus is basically on relationships and according to Brophy's systematic review (Brophy, 2004), this layer is closely linked to the previous one because the building of positive personal characteristics can, in turn, improve the relational skills of students, thereby allowing them to strengthen their relationships, whether with parents, peers or teachers. The importance of this concept is clearly evident from the number of studies which sought to determine how relationships influenced school belonging (Anderman, 2003; Garcia-Reid, 2007; Hamm & Faircloth, 2005; Johnson, 2009; Reschly et al., 2008; Wang & Eccles, 2012). However, it should be noted that the importance of relationships is not limited to school belonging but is also

included within the concept of school engagement (Appleton et al., 2008). In engagement theories, the value of relationships is mentioned as part of the classroom environment where connections with peers and teachers have been reported to exert a strong influence on engagement levels (Battistich et al., 1997).

The mesosystem represents the third layer of the socio-ecological framework for which some of the elements overlap with constructs of school engagement. Broadly speaking, this level involves the school environment and its associated features such as the organizational structure, school policies or school practices which together are known to affect school belonging (Loukas et al., 2010; Waters et al., 2010). This description of the mesosystem clearly bears similarities with the contextual factors mentioned in the engagement literature, especially those which outline the influence of school-level factors (e.g., Fredricks et al., 2004). More specifically, at the mesosystem level, multiple group memberships and participation in extracurricular activities have been shown to influence school belonging in a positive way (Dotterer et al., 2007; Drolet & Arcand, 2013). Interestingly, these same features are also recognized as promoting behavioral and emotional engagement (Finn, 1993; Finn et al., 1995; Wehlage & Smith, 1992), hence these may be considered as a common measure for both school belonging and school engagement. In addition, engagement theories also distinguish between school-level factors and classroom contexts and even though the same distinction is not made in belonging models, the same features such as task characteristics or even autonomy support are also accepted as being important for fostering school belonging (Vaz et al., 2015). It can be concluded, therefore, that the environmental context acts as a common variable for both engagement, and school belonging concepts.

It will be observed that as we move away from the outermost circle depicted in Fig. 1, the similarity or overlap with other constructs is reduced, and this is particularly obvious with the exo- and the macrosystem of the socio-ecological framework. The former involves surrounding communities such as local businesses and community groups while the latter consists of wider legal and public policies (e.g., government-driven initiatives and regulations) (Saab, 2009). Therefore, a common aspect of these two levels is that they are not directly associated with students (Allen, Vella-Brodrick et al., 2016) but instead, they affect school belonging by influencing school activities, policies, and objectives. This could be the main reason for the absence of overlapping constructs as school engagement is more specifically focused on students. Nevertheless, the exosystem and mesosystem remain two important levels at which decision- or policy-makers may intervene in an attempt to foster school belonging.

In a similar way, in the two-dimensional model of student engagement described by Finn, two components of engagement were identified, namely, participation and identification (Finn, 1989, 1993; Finn & Rock, 1997). These components were related to those suggested by Brewster and Bowen (2004), with the participation component referring to the behavioral dimension and the identification part involving the affective side, which eventually relates to a student's sense of belonging to school, thereby showing some degree of overlap of the two terms.

Another way of viewing this overlap is through the measures used for school belonging. In this case, when investigating school connectedness based on these measures, Libbey (2004) identified common constructs such as academic engagement, discipline and fairness, students' liking of school, student voice, involvement in extracurricular activities, peer relations, safety, and teacher support which altogether represent important themes in a large number of measures and terms used to describe school belonging. As noted earlier, some of these constructs are also common in defining school engagement and hence further highlights how this concept is closely related to that of school belonging. Nevertheless, it should be remembered that both represent clearly defined terms and should therefore be used appropriately.

Outcomes of School Belonging and Engagement

From a historical perspective, it has been generally observed that students tend to show less enthusiasm as they progress through the school system, with increasing numbers either leaving or being almost uninterested by the time they reach higher schools (Skinner, Kindermann, Connell et al., 2009; Steinberg et al., 1996). The concepts of school belonging and engagement were, therefore, developed as a means of understanding this declining process, with the main outcome being to achieve academic success. This outcome was considered to be the primary objective which had to be attained but over time, the concepts evolved such that each concept now has a defined set of outcomes which, in a general way, can be classified as either positive or negative. For instance, based on the results of previous studies, Fredricks et al. (2004), like other researchers (Dotterer & Lowe, 2011; Finn & Zimmer, 2012), describe the positives under the broad category of academic achievement and found that they were positively related with both emotional and behavioral engagement (Connell & Wellborn, 1991; Skinner et al., 1990). Conversely, school dropout is considered as the main negative outcome which occurs as a result of low engagement levels. In fact, preventing school dropouts may be considered to be the main objective behind the different theoretical frameworks of engagement (Reschly & Christenson, 2012), particularly the one developed by Finn (1989). However, other authors took a different approach although the ultimate outcome remains of promoting academic success or avoiding dropouts, a number of intermediate objectives have also been recognized, depending on which component of engagement was encouraged. One example is behavioral engagement where three types of targeted results can be identified. These include following school regulations while avoiding repeated absences or lateness as well as trouble-making (Finn, 1993; Finn & Rock, 1997), being involved in academic learning in the form of efforts, showing attention or completion of homework (Birch & Ladd, 1997; Finn et al., 1995) and finally, participation in activities, both academic and nonacademic ones (Finn et al., 1995). Similarly, results of emotional engagement could take the form of positive emotions or showing interest (Connell & Wellborn, 1991) while developing good relationships with peers and teachers (Lee & Smith, 1995). On the other hand, being conceptualized as a student's psychological investment, the outcome of cognitive engagement may be more difficult to assess. However, some researchers consider visible markers such as the ability to solve problems, a particular preference for hard work as well as work commitments as indicative of successful cognitively engaged students (Connell & Wellborn, 1991).

As previously discussed, academic success is also a major outcome which is shared by school belonging, and achieving this has been the main focus of many studies (e.g., Mai et al., 2015). Similarly, the main negative outcome due to the absence of belongingness is school dropout (Hascher & Hagenauer, 2010) but at the same time, a number of intermediate outcomes are also targeted. For instance, as explained by the socio-ecological framework, school belonging is highly influenced by individual characteristics, relationships, and school factors. Hence, positive outcomes often involve improved self-characteristics such as higher self-esteem or self-discipline (Dotterer & Wehrspann, 2016; Mai et al., 2015). Furthermore, better relationships with teachers and peers promote higher social skills (Mai et al., 2015) while encouraging higher school participation (Finn, 1989). More importantly though, school belonging also helps to promote high levels of engagement (Lam et al., 2012; Roorda et al., 2011) and therefore, being connected to the school promotes positive student well-being.

Interventions for School Belonging and Student Engagement

Since school belonging and student engagement are clearly important within the educational context, it is, therefore, not surprising that a genuine attempt has been made to identify and apply

interventions to foster both of them. In this respect, through randomized control trials as well as systematic reviews, many researchers have assessed the suitability of interventions which are often guided by well-established theories to identify ideal points of intervention (Allen, Jamshidi et al., 2021a, 2021b; Christenson & Pohl, 2020; Fredricks et al., 2019; Greenwood & Kelly, 2019). For instance, Finn's participation–identification model (1989) helps to understand the process which causes students to leave school early; this was applied in the design and implementation of the Check & Connect projects (C & C) that sought to increase school completion (Christenson & Pohl, 2020). In this case, engagement was promoted in a number of ways by, for example, recognizing early warning signs of disengagement, monitoring students' attendance, academic performances and progress, and even involving parents in order to strengthen family–school relationships. In fact, the multidimensional nature of engagement makes it possible to identify different types of interventions which may be aimed at promoting specific components of engagement (i.e., behavioral, emotional, and cognitive) (Fredricks et al., 2019). Similarly, based on other models (e.g., the self-system motivational model), some interventions have considered contextual factors as a means of fostering engagement, while others (e.g., the Positive-Activity Model or the Synergistic Change Model) have, instead, focused on positive psychology interventions to foster well-being (Fredricks et al., 2019; Lyubomirsky & Layous, 2013; Rusk et al., 2018).

As far as belonging is concerned, Greenwood and Kelly's (2019) systematic review pointed out the different ways in which belonging could be fostered. They identified providing support, whether academic or personal, the school culture and classroom practices as those features which were most likely to encourage connectedness. While these features are often part of normal practice within schools, they may also be implemented as part of intervention programs. In a similar way to engagement interventions, empirically supported theories form the basis of belonging interventions. These may be focused on the positive development of young people as well as the enhancement of their social skills, especially by establishing positive relationships with teachers and peers while encouraging teacher–student communication (Chapman et al., 2013). By building on the results of previous studies, Allen, Jamshidi et al. (2021a, 2021b) also identified other types of school interventions, such as those targeting social skills, problem-solving, and goal planning which were aimed at improving students' behavior for better connectedness. Similarly, interventions involving the regulation of students' emotions and those displayed toward teachers or peers were also found to be effective at promoting well-being, with positive effects even observed in the cases of disabled students, those who need mental health support as well as those who are likely to have low academic performance. Although the above-mentioned measures are by no means exhaustive, they do represent examples where theoretical knowledge was successfully translated into practice.

Future Research and Practice

There is no doubt that, since their conceptualization, we have now come a long way in our understanding of belonging and engagement. However, the avenues for further research are as numerous as before, as we seek to improve our current knowledge regarding these concepts. One key issue is that there are many discrepancies and inconsistencies in the way belonging and engagement have been described and defined in literature (Allen, Jamshidi et al., 2021a, 2021b; Slaten et al., 2016), leading to the overlap and differences mentioned previously. Furthermore, this can be particularly problematic when devising measurement scales aimed at providing empirical data in support of a theoretical framework, as results may not be easily comparable. More recently, Wong and Liem (2021) have elaborated on the risks associated with overgeneralization of terms such as student engagement. Hence working toward the standardization of constructs might help in overcoming such issues in the future. More precise measurements and careful

use of terminology are needed to clearly distinguish terms like belonging and engagement (Allen et al., 2021).

Future research may also be directed toward the implementation of new interventions as despite the positive outcomes, there have been a number of shortcomings. One key issue is that of implementation, which refers to how successfully a particular program is applied within a context. The implementation of school measures to foster belonging and engagement is dependent on a number of factors (Sanetti & Luh, 2020), but as noted by Fredricks et al. (2019), such information is often absent despite its importance for interpreting results. In fact, many reported interventions may also not be of high quality, thereby preventing researchers from drawing appropriate conclusions from available data (Allen, Jamshidi et al., 2021a, 2021b). Fredricks et al. (2019) further identified a number of other issues with reported measures but one which deserves mention is that of variability among students. Although a multitiered approach (from general to specific subgroups of students) for belonging and engagement interventions can be used, they are often uniformly applied, albeit to specific class levels or age groups. As such, they often do not consider that the levels of belonging and engagement can be highly variable among students. However, since individualized approaches might also not be a plausible option, having measures targeted at specific groups (e.g., socio-economic background, special needs, family issues) might, in the future, provide alternative options for reliably assessing the suitability of measures aimed at fostering school belonging and student engagement.

Conclusion

This chapter has presented a narrative synthesis that has explored the similarities and differences between school engagement and belonging. Our review reveals that the two concepts are often confused or used interchangeably despite being distinct terms which examine the different psychological needs of students. However, they show unmistakable similarities in terms of their constructs, especially when considering the various models which explain how they are influenced by surrounding factors (see Table 1). The differences and similarities identified in this review are presented in Table 1.

Based on our review, it can be concluded that school belonging and engagement are intricately linked and may even be considered to be symbiotic, requiring each other to exist. However, it is also widely accepted that even though there is enough empirical evidence to show how they encourage positive outcomes and reduce negative ones, further research is still required to build on the available knowledge. In short, the concepts of belonging and student engagement can be con-

Table 1 Similarities and differences of school belonging and engagement

Features and themes	School belonging	School engagement
As a mediator of academic outcomes	Less evidence for grade improvement and more evidence for academic related outcomes like hardiness and motivation	Highly associated with improved academic performance and emotional well -being
Interventions	Limited interventions that specifically aim to increase school belonging	Higher number of interventions aimed at improving behavioral, emotional and cognitive engagement
Feature	Manifested at an emotional level	Can be of different subtypes (i.e., behavioral, emotional, and cognitive) and hence, not limited to emotional traits
As an outcome	Influenced by a number of factors grouped at different levels	Influenced by various factors identified through different theoretical models
Influential factors	Can be fostered through positive emotions and building relationships	Positive emotions and relationships are particularly important for emotional engagement

sidered two best friends—needed for one another and essential for students in educational contexts.

References

Allen, K. A., Jamshidi, N., Berger, E., Reupert, A., Wurf, G., & May, F. (2021a). Effective school-based interventions for building school belonging in adolescence: A systematic review. *Educational Psychology Review*, 1–29. https://doi.org/10.1007/s10648-021-09621-w

Allen, K. A., Gray, D., Baumeister, R., & Leary, M. (2021). The need to belong: A deep dive into the origins, implications, and future of a foundational construct. *Educational Psychology Review*. https://doi.org/10.1007/s10648-021-09633-6

Allen, K. A. (2020a). *The psychology of belonging*. Routledge (Taylor and Francis Group).

Allen, K. A. (2020b). Do you feel like you belong? *Frontiers for Young Minds, 8*, 99. https://doi.org/10.3389/frym.2020.00099

Allen, K. A., & Bowles, T. (2012). Belonging as a guiding principle in the education of adolescents. *Australian Journal of Educational and Developmental Psychology, 12*, 108–119.

Allen, K. A**.**, & Kern, M. L. (2017). *School belonging in adolescents: Theory, research, and practice.* Springer Social Sciences. ISBN 978-981-10-5996-4.

Allen, K. A., & Kern, P**.** (2019). *Boosting school belonging in adolescents: Interventions for teachers and mental health professionals*. Routledge.

Allen, K. A., Jamshidi, N., Berger, E., Reupert, A., Wurf, G., & May, F. (2021b). Impact of school-based interventions for building school belonging in adolescence: A systematic review. *Educational Psychology Review*. https://doi.org/10.1007/s10648-021-09621-w

Allen, K. A., Kern, M. L., Rozek, C. S., McInerney, D. M., & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology, 73*(5), 1–16. https://doi.org/10.1080/00049530.2021.1883409

Allen, K. A., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2016). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review, 30*(1), 1–34. https://doi.org/10.1007/s10648-016-9389-8

Allen, K. A., Vella-Brodrick, D., & Waters, L. (2016). Fostering school belonging in secondary schools using a socio-ecological framework. *The Educational and Developmental Psychologist, 33*(1), 1–25. https://doi.org/10.1017/edp.2016.5

Allen, K., Boyle, C., & Roffey, S. (2019). Creating a culture of belonging in a school context. *Educational and Child Psychology, 36*(4), 5–7.

Anderman, L. H. (2003). Academic and social perceptions as predictors of change in middle school students' sense of school belonging. *The Journal of Experimental Education, 72*(1), 5–22. https://doi.org/10.1080/00220970309600877

Anderman, L. H., & Freeman, T. M. (2004). Students' sense of belonging in school. *Advances in Motivation and Achievement, 13*, 27–63. https://doi.org/10.1016/S0749-7423(03)13002-6

Anderson, J., Boyle, C., & Deppeler, J. (2014). The ecology of inclusive education: Reconceptualising Bronfenbrenner. In Z. Zhang, P. W. K. Chan, & C. Boyle (Eds.), *Equality in education: Fairness and inclusion* (pp. 23–34). Sense Publishers.

Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools, 45*(5), 369–386. https://doi.org/10.1002/pits.20303

Archambault, I., Janosz, M., Fallu, J. S., & Pagani, L. S. (2009). Student engagement and its relationship with early high school dropout. *Journal of Adolescence, 32*(3), 651–670. https://doi.org/10.1016/j.adolescence.2008.06.007

Bakadorova, O., & Raufelder, D. (2017). The interplay of students' school engagement, school self-concept and motivational relations during adolescence. *Frontiers in Psychology, 8*, 2171. https://doi.org/10.3389/fpsyg.2017.02171

Barker, B. G., & Gump, P. V. (1964). *Big school, small school: High school size and student behavior*. Press.

Battistich, V., Solomon, D., Watson, M., & Schaps, E. (1997). Caring school communities. *Educational Psychologist, 32*(3), 137–151. https://doi.org/10.1207/s15326985ep3203_1

Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development, 66*(5), 1312–1329. https://doi.org/10.2307/1131649

Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*(1), 61–79. https://doi.org/10.1016/S0022-4405(96)00029-5

Blumenfeld, P. C., & Meece, J. L. (1988). Task factors, teacher behavior, and students' involvement and use of learning strategies in science. *The Elementary School Journal, 88*(3), 235–250. https://doi.org/10.1086/461536

Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., & Slap, G. B. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics, 106*(5), 1027–1021. https://doi.org/10.1542/peds.106.5.1017

Bosnjak, A., Boyle, C., & Chodkiewicz, A. R. (2017). An intervention to retrain attributions using CBT: A pilot study. *The Educational and Developmental Psychologist, 34*(1), 21–32. https://doi.org/10.1017/edp.2017.1

Bouchard, K. L., & Berg, D. (2017). Students' school belonging: Juxtaposing the perspectives of teachers and students in the late elementary school years (grades 4–8). *School Community Journal, 27*(1), 107–136.

Brendtro, L. K., Brokenleg, M., & van Bockern, S. (2002). *Reclaiming youth at risk: Our hope for the future*. National Educational Service.

Brewster, A., & Bowen, G. L. (2004). Teacher support and the school engagement of Latino middle and high school students at risk of school failure. *Child and Adolescent Social Work Journal, 21*(1), 47–67. https://doi.org/10.1023/B:CASW.0000012348.83939.6b

Bronfenbrenner, U. (1979). *The ecology of human development*. Harvard University Press.

Brophy, J. (2004). *Motivating students to learn* (2nd ed.).

Buhs, E. S., & Ladd, G. W. (2001). Peer rejection as antecedent of young children's school adjustment: An examination of mediating processes. *Developmental Psychology, 37*(4), 550–560. https://doi.org/10.1037/0012-1649.37.4.550

Chapman, R. L., Buckley, L., Sheehan, M., & Shochet, I. (2013). School-based programs for increasing connectedness and reducing risk behavior: A systematic review. *Educational Psychology Review, 25*(1), 95–114. https://doi.org/10.1007/s10648-013-9216-4

Chodkiewicz, A. R., & Boyle, C. (2016). Promoting positive learning in students aged 10–12 years using attribution retraining and cognitive behavioural therapy: A pilot study. *School Psychology International, 37*(5), 519–535. https://doi.org/10.1177/0143034316667114

Christenson, S. L., & Pohl, A. J. (2020). The relevance of student engagement: The impact of and lessons learned implementing check & connect. In A. Reschly, A. Pohl, & S. Christenson (Eds.), *Student Engagement* (pp. 3–30). Springer. https://doi.org/10.1007/978-3-030-37285-9_1

Connell, J. P. (1990). Context, self, and action: A motivational analysis of self-system processes across the life span. In D. Cicchetti & M. Beeghly (Eds.), *The John D. and Catherine T. MacArthur foundation series on mental health and development. The self in transition: Infancy to childhood* (pp. 61–97). University of Chicago Press.

Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *The Minnesota symposia on child psychology* (Vol. 23, pp. 43–77). Lawrence Erlbaum Associates, Inc..

Croninger, R. G., & Lee, V. E. (2001). Social capital and dropping out of high school: Benefits to at-risk students of teachers' support and guidance. *Teachers College Record, 103*(4), 548–581. https://doi.org/10.1111/0161-4681.00127

Deci, E., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.

DeRosier, M. E., Kupersmidt, J. B., & Patterson, C. J. (1994). Children's academic and behavioral adjustment as a function of the chronicity and proximity of peer rejection. *Child Development, 65*(6), 1799–1813. https://doi.org/10.2307/1131295

Dincer, A., Yeşilyurt, S., Noels, K. A., & Vargas Lascano, D. I. (2019). Self-determination and classroom engagement of EFL learners: A mixed-methods study of the self-system model of motivational development. *SAGE Open, 9*(2), 215824401985391. https://doi.org/10.1177/2158244019853913

Dotterer, A. M., & Lowe, K. (2011). Classroom context, school engagement, and academic achievement in early adolescence. *Journal of Youth and Adolescence, 40*(12), 1649–1660. https://doi.org/10.1007/s10964-011-9647-5

Dotterer, A. M., & Wehrspann, E. (2016). Parent involvement and academic outcomes among urban adolescents: Examining the role of school engagement. *Educational Psychology, 36*(4), 812–830. https://doi.org/10.1080/01443410.2015.1099617

Dotterer, A. M., McHale, S. M., & Crouter, A. C. (2007). Implications of out-of-school activities for school engagement in African American adolescents. *Journal of Youth and Adolescence, 36*(4), 391–401. https://doi.org/10.1007/s10964-006-9161-3

Doyle, W. (1986). Classroom management techniques and student discipline. *ERIC*. Clearinghouse.

Drolet, M., & Arcand, I. (2013). Positive development, sense of belonging, and support of peers among early adolescents: Perspectives of different actors. *International Education Studies, 6*(4), 29–38. https://doi.org/10.5539/ies.v6n4p29

Eccles, J. S. (2004). Schools, academic motivation, and stage-environment fit. In R. M. Lerner & L. D. Steinberg (Eds.), *Handbook of adolescent psychology* (pp. 125–153). Wiley.

Eccles, J. S. (2016). Engagement: Where to next? *Learning and Instruction, 43*, 71–75. https://doi.org/10.1016/j.learninstruc.2016.02.003

Engels, M. C., Colpin, H., van Leeuwen, K., Bijttebier, P., van den Noortgate, W., Claes, S., Goossens, L., & Verschueren, K. (2016). Behavioral engagement, peer status, and teacher–student relationships in adolescence: A longitudinal study on reciprocal influences. *Journal of Youth and Adolescence, 45*(6), 1192–1207. https://doi.org/10.1007/s10964-016-0414-5

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*(2), 117–142. https://doi.org/10.2307/1170412

Finn, J. D. (1993). *School engagement & students at risk*. National Center for Education Statistics (ED).

Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82*(2), 221–234. https://doi.org/10.1037/0021-9010.82.2.221

Finn, J. D., & Voelkl, K. E. (1993). School characteristics related to student engagement. *Journal of Negro Education, 62*(3), 249–268. https://doi.org/10.2307/2295464

Finn, J. D., & Zimmer, K. S. (2012). Student engagement: What is it? Why does it matter? In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 97–131). Springer Science + Business Media. https://doi.org/10.1007/978-1-4614-2018-7_5.

Finn, J. D., Pannozzo, G. M., & Voelkl, K. E. (1995). Disruptive and inattentive-withdrawn behavior and

achievement among fourth graders. *The Elementary School Journal, 95*(5), 421–434. https://doi.org/10.1086/461853

Fiske, S. T. (2004). *Social beings: A core motives approach to social psychology*. Wiley.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109. https://doi.org/10.3102/00346543074001059

Fredricks, J. A., Blumenfeld, P. B., Friedel, J., & Paris, A. (2002). *Increasing engagement in urban settings: An analysis of the influence of the social and academic context on student engagement*. Annual Meeting of the American Educational Research Association.

Fredricks, J. A., Reschly, A. L., & Christenson, S. L. (2019). Interventions for student engagement: Overview and state of the field. *Handbook of student engagement interventions* (pp. 1–11). https://doi.org/10.1016/b978-0-12-813413-9.00001-2.

French, D. C., & Conrad, J. (2001). School dropout as predicted by peer rejection and antisocial behavior. *Journal of Research on Adolescence, 11*(3), 225–244. https://doi.org/10.1111/1532-7795.00011

Frydenberg, E., Ainley, M., & Russell, J. (2005). *Student motivation and engagement: Schooling issues digest*. Department of Education.

Furlong, M. J., Froh, J. J., Muller, M. E., & Gonzalez, V. (2013). The role of gratitude in fostering school bonding. *National Society for the Study of Education, 113*(1), 58–79.

Furlong, M. J., Whipple, A. D., Jean, G. S., Simental, J., Soliz, A., & Punthuna, S. (2003). Multiple contexts of school engagement: Moving toward a unifying framework for educational research and practice. *California School Psychologist, 8*, 99–113. https://doi.org/10.1007/BF03340899

Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology, 95*(1), 148–162. https://doi.org/10.1037/0022-0663.95.1.148

Garcia-Reid, P. (2007). Examining social capital as a mechanism for improving school engagement among low income Hispanic girls. *Youth & Society, 39*, 164–181. https://doi.org/10.1177/0044118X07303263

Greenwood, L., & Kelly, C. (2019). A systematic literature review to explore how staff in schools describe how a sense of belonging is created for their pupils. *Emotional and Behavioural Difficulties, 24*(1), 3–19. https://doi.org/10.1080/13632752.2018.1511113

Hagerty, B. M., Williams, R. A., Coyne, J. C., & Early, M. R. (1996). Sense of belonging and indicators of social and psychological functioning. *Archives of Psychiatric Nursing, 10*(4), 235–244. https://doi.org/10.1016/S0883-9417(96)80029-X

Hamm, J. V., & Faircloth, B. S. (2005). The role of friendship in adolescents' sense of school belonging. *New Directions for Child and Adolescent Development, 107*, 61–78. https://doi.org/10.1002/cd.121

Hascher, T., & Hagenauer, G. (2010). Alienation from school. *International Journal of Educational Research, 49*(6), 220–232. https://doi.org/10.1016/j.ijer.2011.03.002

Helme, S., & Clarke, D. (2001). Identifying cognitive engagement in the mathematics classroom. *Mathematics Education Research Journal, 13*(2), 133–153. https://doi.org/10.1007/BF03217103

Irvin, M. J., Meece, J. L., Byun, S. Y., Farmer, T. W., & Hutchins, B. C. (2011). Relationship of school context to rural youth's educational achievement and aspirations. *Journal of Youth and Adolescence, 40*(9), 1225–1242. https://doi.org/10.1007/s10964-011-9628-8

Johnson, L. S. (2009). School contexts and student belonging: A mixed methods study of an innovative high school. *The School Community Journal, 19*(1), 99–118.

Kindermann, T. A. (1993). Natural peer groups as contexts for individual development: The case of children's motivation in school. *Developmental Psychology, 29*(6), 970–977. https://doi.org/10.1037/0012-1649.29.6.970

Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2019). The relationships between school belonging and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education: A meta-analytic review. *Research Papers in Education, 35*(6), 641–680. https://doi.org/10.1080/02671522.2019.1615116

Lam, S., Wong, B. P. H., Yang, H., & Liu, Y. (2012). Understanding student engagement with a contextual model. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 403–419). Springer. https://doi.org/10.1007/978-1-4614-2018-7_19

Langevin, L. (1999). L'abandon scolaire. In *On ne naît pas décrocheur!* Logiques.

Lee, V. E., & Smith, J. B. (1995). Effects of high school restructuring and size on early gains in achievement and engagement. *Sociology of Education, 68*(4), 241–270. https://doi.org/10.2307/2112741

Li, Y. (2011). School engagement: What it is and why it is important for positive youth development. *Advances in Child Development and Behavior, 41*, 131–160. https://doi.org/10.1016/B978-0-12-386492-5.00006-3

Libbey, H. P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health, 74*(7), 274–283. https://doi.org/10.1111/j.1746-1561.2004.tb08284.x

Lippman, L., & Rivers, A. (2008). Assessing school engagement: A guide for out-of-school time program practitioners. *Child Trends.*. http://www.childtrends.org/files/child_Trends-2008_10_29_rb_Schoolengage.pdf

Loukas, A., Roalson, L. A., & Herrera, D. E. (2010). School connectedness buffers the effects of negative family relations and poor effortful control on early adolescent conduct problems. *Journal of Research on Adolescence, 20*(1), 13–22. https://doi.org/10.1111/j.1532-7795.2009.00632.x

Lyubomirsky, S., & Layous, K. (2013). How do simple positive activities increase Well-being? *Current*

Directions in Psychological Science, 22(1), 57–62. https://doi.org/10.1177/0963721412469809

Mai, M. Y. M., Yusuf, M., & Saleh, M. (2015). Motivation and engagement as a predictor of students' science achievement satisfaction of Malaysian of secondary school students. *European Journal of Social Sciences Education and Research, 2*(4), 25–33.

Malti, T., & Noam, G. G. (2009). A developmental approach to the prevention of adolescent's aggressive behavior and the promotion of resilience. *International Journal of Developmental Science, 3*(3), 215–217. https://doi.org/10.3233/DEV-2009-3303

Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal, 37*(1), 153–184.

McMahon, S. D., Parnes, A. L., Keys, C. B., & Viola, J. J. (2008). School belonging among low-income urban youth with disabilities: Testing a theoretical model. *Psychology in the Schools, 45*(5), 387–401. https://doi.org/10.1002/pits.20304

Midgley, C., & Feldlaufer, H. (1987). Students' and teachers' decision-making fit before and after the transition to junior high school. *The Journal of Early Adolescence, 7*(2), 225–241. https://doi.org/10.1177/0272431687072009

Moos, R. H. (1979). *Evaluating educational environments*. Jossey-Bass.

National Research Council and Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. The National Academies Press.

Natriello, G. (1984). Problems in the evaluation of students and student disengagement from secondary schools. *Journal of Research and Development in Education, 17*(4), 14–24.

Neel, C. G. O., & Fuligni, A. (2013). A longitudinal study of school belonging and academic motivation across high school. *Child Development, 84*(2), 678–692. https://doi.org/10.1111/j.1467-8624.2012.01862.x

Newmann, F. M. (1981). Reducing student alienation in high schools: Implications of theory. *Harvard Educational Review, 51*(4), 546–564. https://doi.org/10.17763/haer.51.4.xj67887u87l5t66t

Newmann, F. M. (1991). Linking restructuring to authentic student achievement. *Phi Delta Kappan, 72*(6), 458–463.

Newmann, F. M., Wehlage, G. G., & Lamborn, S. D. (1992). The significance and sources of student engagement. In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools* (pp. 11–39). Teachers College Press.

Nouwen, W., & Clycq, N. (2020). Assessing the added value of the self-system model of motivational development in explaining school engagement among students at risk of early leaving from education and training. *European Journal of Psychology of Education, 36*, 243–261. https://doi.org/10.1007/s10212-020-00476-3

O'Brennan, L. M., & Furlong, M. J. (2010). Relations between students' perceptions of school connectedness and peer victimization. *Journal of School Violence, 9*(4), 375–391. https://doi.org/10.1080/15388220.2010.509009

O'Brien, K. A., & Bowles, T. V. (2013). The importance of belonging for adolescents in secondary school settings. *The European Journal of Social & Behavioural Sciences, 5*(2), 976–984.

Patrick, B. C., Skinner, E. A., & Connell, J. P. (1993). What motivates children's behavior and emotion? Joint effects of perceived control and autonomy in the academic domain. *Journal of Personality and Social Psychology, 65*(4), 781–791. https://doi.org/10.1037/0022-3514.65.4.781

Perry, N. E. (1998). Young children's self-regulated learning and contexts that support it. *Journal of Educational Psychology, 90*(4), 715–729. https://doi.org/10.1037/0022-0663.90.4.715

Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*(4), 667–686. https://doi.org/10.1037/0022-0663.95.4.667

Reeve, J. (2013). How students create motivationally supportive learning environments for themselves: The concept of agentic engagement. *Journal of Educational Psychology, 105*(3), 579–595. https://doi.org/10.1037/a0032690

Reschly, A. L., & Christenson, S. L. (2012). Jingle, jangle, and conceptual haziness: Evolution and future directions in the engagement construct. In S. L. Christenson, A. L. Reschly, & C. A. Wylie (Eds.), *Handbook of research on student engagement* (pp. 3–19). Springer Science.

Reschly, A. L., Huebner, E. S., Appleton, J. J., & Antaramian, S. (2008). Engagement as flourishing: The contribution of positive emotions and coping to adolescents' engagement at school and with learning. *Psychology in the Schools, 45*(5), 419–431. https://doi.org/10.1002/pits.20306

Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement. *Review of Educational Research, 81*(4), 493–529. https://doi.org/10.3102/0034654311421793

Rowe, F., Stewart, D., & Patterson, C. (2007). Promoting school connectedness through whole school approaches. *Health Education, 107*(6), 524–542. https://doi.org/10.1108/09654280710827920

Rudolph, K. D., Lambert, S. F., Clark, A. G., & Kurlakowsky, K. D. (2001). Negotiating the transition to middle school: The role of self-regulatory processes. *Child Development, 72*(3), 929–946. https://doi.org/10.1111/1467-8624.00325

Rusk, D. R., Vella-Brodrick, D. A., & Waters, L. (2018). A complex dynamic systems approach to lasting positive change: The synergistic change mode. *The Journal of Positive Psychology, 13*(4), 406–418. https://doi.org/10.1080/17439760.2017.1291853

Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology, 57*(5), 749–761. https://doi.org/10.1037/0022-3514.57.5.749

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*(1), 54–67. https://doi.org/10.1006/ceps.1999.1020

Ryan, R. M., & Deci, E. L. (2009). Promoting self-determined school engagement: Motivation, learning, and Well-being. In R. Wenzel & A. Wigfield (Eds.), *Educational psychology handbook series. Handbook of motivation at school* (pp. 171–195). Routledge/Taylor & Francis Group.

Ryan, R. M., Stiller, J. D., & Lynch, J. H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *The Journal of Early Adolescence, 14*(2), 226–249. https://doi.org/10.1177/027243169401400207

Saab, H. (2009). *The school as a setting to promote student health*. https://Qspace.Library.Queensu.Ca/

Saeed, S., & Zyngier, D. (2012). How motivation influences student engagement: A qualitative case study. *Journal of Education and Learning, 1*(2), 252–267. https://doi.org/10.5539/jel.v1n2p252

Sánchez, B., Colón, Y., & Esparza, P. (2005). The role of sense of school belonging and gender in the academic adjustment of latino adolescents. *Journal of Youth and Adolescence, 34*(6), 619–628. https://doi.org/10.1007/s10964-005-8950-4

Sanetti, L. M. H., & Luh, H. J. (2020). Treatment fidelity in school-based intervention. In A. Reschly, A. Pohl, & S. Christenson (Eds.), *Student Engagement* (pp. 77–87). Springer. https://doi.org/10.1007/978-3-030-37285-9_4

Sciarra, D. T., & Seirup, H. J. (2008). The multidimensionality of school engagement and math achievement among racial groups. *Professional School Counseling, 11*(4), 218–228. https://doi.org/10.1177/2156759X0801100402

Shochet, I. M., Smith, C. L., Furlong, M. J., & Homel, R. (2011). A prospective study investigating the impact of school belonging factors on negative affect in adolescents. *Journal of Clinical Child & Adolescent Psychology, 40*(4), 586–595. https://doi.org/10.1080/15374416.2011.581616

Shochet, I. M., Smyth, T. L., & Homel, R. (2007). The impact of parental attachment on adolescent perception of the school environment and school connectedness. *Australian and New Zealand Journal of Family Therapy, 28*(2), 109–118. https://doi.org/10.1375/anft.28.2.109

Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85*(4), 571–581. https://doi.org/10.1037/0022-0663.85.4.571

Skinner, E. A., Kindermann, T. A., & Furrer, C. J. (2009). A motivational perspective on engagement and disaffection. *Educational and Psychological Measurement, 69*(3), 493–525. https://doi.org/10.1177/0013164408323233

Skinner, E. A., Kindermann, T., Connell, J. P., & Wellborn, J. G. (2009). Engagement and disaffection as organizational constructs in the dynamics of motivational development. In K. R. Wenzel & A. Wigfield (Eds.), *Educational psychology handbook series: Handbook of motivation at school* (pp. 223–245). Routledge/Taylor & Francis Group.

Skinner, E. A., Wellborn, J. G., & Connell, J. P. (1990). What it takes to do well in school and whether I've got it: A process model of perceived control and children's engagement and achievement in school. *Journal of Educational Psychology, 82*(1), 22–32. https://doi.org/10.1037/0022-0663.82.1.22

Slaten, C. D., Ferguson, J. K., Allen, K. A., Brodrick, D. V., & Waters, L. (2016). School belonging: A review of the history, current trends, and future directions. *The Educational and Developmental Psychologist, 33*(1), 1–15. https://doi.org/10.1017/edp.2016.6

St-Amand, J., Girard, S., & Smith, J. (2017). Sense of belonging at school: Defining attributes, determinants, and sustaining strategies. *IAFOR Journal of Education, 5*(2), 105–119. https://doi.org/10.22492/ije.5.2.05

Steinberg, L. D., Brown, B. B., & Dornbusch, S. M. (1996). *Beyond the classroom: Why school reform has failed and what parents need to do*. Simon and Schuster.

Turner, J. C. (1995). The influence of classroom contexts on young children's motivation for literacy. *Reading Research Quarterly, 30*(3), 410–441. https://doi.org/10.2307/747624

Vaz, S., Falkmer, M., Ciccarelli, M., Passmore, A., Parsons, R., Tan, T., & Falkmer, T. (2015). The personal and contextual contributors to school belongingness among primary school students. *PLoS One, 10*(4), e0123353. https://doi.org/10.1371/journal.pone.0123353

Verhoeven, M., Poorthuis, A. M. G., & Volman, M. (2019). The role of school in adolescents' identity development. A literature review. *Educational Psychology Review, 31*, 35–63. https://doi.org/10.1007/s10648-018-9457-3

Voelkl, K. E. (2012). School identification. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 193–218). Springer.

Wang, M. T., & Eccles, J. S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. *Child Development, 83*(3), 877–895. https://doi.org/10.1111/j.1467-8624.2012.01745.x

Waters, S. K., Cross, D. S., & Runions, K. (2009). Social and ecological structures supporting adolescent connectedness to school: A theoretical model. *Journal*

of School Health, 79(11), 516–524. https://doi.org/10.1111/j.1746-1561.2009.00443.x

Waters, S., Cross, D., & Shaw, T. (2010). Does the nature of schools matter? An exploration of selected school ecology factors on adolescent perceptions of school connectedness. *British Journal of Educational Psychology, 80*(3), 381–402. https://doi.org/10.1348/000709909X484479

Wehlage, G. G., & Smith, G. A. (1992). Building new programs for students at risk. In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools*. Teachers College Press.

Wehlage, G. G., Rutter, R. A., Smith, G. A., Lesko, N. L., & Fernandez, R. R. (1989). *Reducing the risk: Schools as communities of support*. The Falmer Press.

Wentzel, K. R. (1994). Relations of social goal pursuit to social acceptance, classroom behavior, and perceived social support. *Journal of Educational Psychology, 86*(2), 173–182. https://doi.org/10.1037/0022-0663.86.2.173

Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R. W., & Davis-Kean, P. (2006). Development of achievement motivation. In N. Eisenberg & W. Damon (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (Vol. 3, 6th ed., pp. 933–1002). Wiley.

Williams, K. C., & Williams, C. C. (2011). Five key ingredients for improving student motivation. *Research in Higher Education Journal, 12*, 121–123.

Williams, L. J., & Downing, J. E. (1998). Membership and belonging in inclusive classrooms: What do middle school students have to say? *Journal of the Association for Persons with Severe Handicaps, 23*(2), 98–110. https://doi.org/10.2511/rpsd.23.2.98

Willms, J. D. (2000). A sense of belonging and participation: Results from PISA 2000. *OECD*. http://www.Oecd.Org/Edu/School/Programmeforinternationalstudentassessmentpisa/33689437.Pdf.

Wong, Z. Y., & Liem, G. A. D. (2021). Student engagement: Current state of the construct, conceptual refinement, and future research directions. *Educational Psychology Review*. https://doi.org/10.1007/s10648-021-09628-3

Wonglorsaichon, B., Wongwanich, S., & Wiratchai, N. (2014). The influence of students school engagement on learning achievement: A structural equation modeling analysis. *Procedia – Social and Behavioral Sciences, 116*, 1748–1755. https://doi.org/10.1016/j.sbspro.2014.01.467