Chapter 2
Indicators and Facilitators of Engagement: Going Beyond Linear Thinking

Research interest concerning engagement has surged over the past two decades. According to Azevedo (2015), a search of articles about engagement over the past 20 years, using the PsycINFO database, returns more than 32,000 articles. With such a large quantity of published research, it is virtually impossible to locate a consistent and unified definition of engagement. Different researchers conceptualize and operationalize the engagement construct in different ways following relevant theoretical perspectives (Fredricks, Blumenfeld, & Paris, 2004; Christenson, Reschly, & Wylie, 2012). For example, Finn's participation–identification framework (Finn, 1989) defined engagement as being students' basic learning behaviors and affective responses including belonging and valuing. Martin's (2007) account expressed engagement in terms of an individual's adaptive and maladaptive cognitions and behaviors. Investigators whose thinking has been informed by both cognitive and sociocultural theories understand engagement as involvement and participation in learning (e.g., Reeve, 2013; Ryu & Lombardi, 2015; Skinner & Pitzer, 2012).

An appealing definition of engagement has been put forth by Christenson et al. (2012) as part of the Epilogue for the Handbook of Research on Student Engagement. After editing 39 chapters on the topic, they concluded that "student engagement refers to the student's active participation in academic and co-curricular or school-related activities, and commitment to educational goals and learning. Engaged students find learning meaningful, and are invested in their learning and future. It is a multidimensional construct that consists of behavioral (including academic), cognitive, and affective subtypes. Student engagement drives learning; requires energy and effort; is affected by multiple contextual influences; and can be achieved for all learners" (p. 816–817).

In line with this recent thinking, we define *engagement as changing participation and co-participation in learning*, and *disengagement as students' withdrawal of their participation* (see also the section on definition in Chap. 1). Students' active participation is observable and can be characterized in multiple ways in terms of cognitive, emotional, behavioral, and social responses and their changes and

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development. This definition aligns with Skinner's description of engagement as "energised, directed, and sustained action" and "observable qualities of students' actual and interactions with academic tasks" (Skinner & Pitzer, 2012, p. 24). Underpinning this definition is recognition that motivation and engagement are related but separable processes. Motivation denotes the internal processes energizing, directing and sustaining engagement. Engagement is the observable energized, directed and sustained actions. Engagement is therefore "observable manifestation of motivation" (Kindermann, 2007, p. 1188).

Engagement as active participation can be conceptualized as both a process and an outcome. Students' participation in learning is of course a desirable outcome. When students' participation is linked with longer-term dependent variables, such as subject choice and school retention, it plays an important mediating role and allows us to understand students' participation as part of a process. A key concept in our definition is the notion of change. This important feature is commensurate with the belief that engagement is achievable for all learners (Christenson et al., 2012) and that engagement often fluctuates and changes over time. This conceptualization points to the need to specifically monitor students who have experienced disengagement and/or exclusion and explore how to re-engage them and to help them shift their engagement focus from passive participation, or in many cases participation–withdrawal, to active and sustained participation.

A crucial consideration in this area of research is to understand factors which promote or hinder engagement. Using our current definition, this consideration is translated into two critical questions: How do we know students are actively participating during the learning process or engaging in an opportunity to learn? What can promote or hinder active participation? To answer the first question, there is a need to consider extensive research that has examined multiple indicators of engagement. In answering the second question, an examination of research on facilitators of engagement is critical.

Separating indicators and facilitators of engagement is significant for two important reasons. First, it will facilitate a focus on observable representations of engagement or their proxies and on developing appropriate measurable variables to capture them (cf. Chi & Wylie, 2014). In this conceptualization, engagement actions and behaviors are distinguished from significant internal processes as well as motivating social and interactive influences. It will also facilitate research on change and development of engagement, allowing the focus on various observable indicators to assess engagement, monitor changes, and isolate important social influences. Second, the separation of indicators and facilitators suggests a causal relationship between these two aspects of engagement. In this sense, facilitators are causal agents that promote and sustain engagement that can be observable based on various indicators (Skinner & Pitzer, 2012). This thinking is important in that it facilitates intervention designs to target a specific engagement facilitator, or a set of them, and allows these to be linked with relevant engagement indicators. From this perspective, facilitators of engagement will point us to important sources of engagement or what Chi and Wylie (2014, p. 219) referred to as "precursor stages of engagement" and allow the use of relevant theoretical models to link facilitators and

indicators of engagement. For example, the separation is important for discussing how social skills as an engagement facilitator enable and sustain social engagement. Without such a distinction, social skills and prosocial behaviors will be mixed. Additionally, promoting engagement for students coming from disadvantaged backgrounds will require this distinction as many of these students often are characterized as unmotivated, sub-skilled, and disengaged. These negative perceptions, to a great extent, confuse indicators and facilitators of engagement and will not be useful in formulating plans to support these students. A demarcation of indicators and facilitators will enable research on sources of disengagement, conditions and influences that aggravate disengagement, and for designing new ways to empower engagement and to focus on malleable and manageable facilitators or facilitating conditions. The discussion about facilitators and indicators also offers insights into fundamental questions on "what" and "why" about engagement.

The separation of indicators and facilitators is consistent with our understanding that motivation and engagement are two separate but related processes, with the former energizing, directing, and sustaining the latter. In addition, the separation is aligned with the self-systems framework (Connell, 1990; Connell & Wellborn, 1991; Skinner, Kindermann, & Furrer, 2009). In this framework, context, self, action, and outcomes are conceptualized as linearly related to each other in a context–self–action–outcome progression. Context refers to opportunities and supports in a specific setting, and self refers to internal processes that occur within the individual. Actions originate from the context and self and are observable behaviors. Outcomes are the results of these actions. Mirroring this theoretical conceptualization, facilitators are located on context and self-dimensions, while indicators are observable actions of engagement.

Three Indicators of Engagement

Student engagement is a multidimensional concept (Christenson et al., 2012; Fredricks et al., 2004; Fredricks, 2011; Skinner, Kindermann, Connell, & Wellborn, 2009). Different models of engagement specify a different number or set of dimensions (Fredricks et al., 2004; Reeve & Tseng, 2011; Pekrun & Linnenbrink-Garcia, 2012). According to the review by Fredericks and colleagues (2004), three important dimensions are important indicators of engagement, a concept adopted by many studies. These three dimensions are cognitive, emotional, and behavioral engagement. In conceptualizing engagement as active participation and co-participation, the multidimensional

understanding of engagement draws us to consider how active participation can be observed in different dimensions and in what ways collaboration with peers and other forms of interactive influences can facilitate their development. A concise review will allow us to build on this research foundation and explore the issues for promoting engagement among students coming from differently vulnerable and disadvantaged backgrounds.

Different studies have focused on specific dimensions, but few have taken an integrated perspective to examine these three dimensions simultaneously. While the three-dimensional conceptualization has been widely accepted, researchers differ in the ways they conceptualize and measure them (Sinatra, Heddy, & Lombardi, 2015). Another important issue is that discussion in the literature often confuses indicators and facilitators of engagement in relation to the three dimensions. It is important that these two parts are conceptually and methodologically separated in order to attain theoretical clarity and for designing intervention that focuses on appropriate levels of operation. Below, we briefly review research on each of these dimensions.

Behavioral Engagement

Behavioral engagement is one of the most widely researched engagement indicators. Behavioral engagement is often understood in two particular ways—positive student behaviors, such as following rules, and learning behaviors, such as paying attention, being self-reliant, and remaining focused while completing an academic task (e.g., Finn & Zimmer, 2012; Guo, Sun, Breit-Smith, Morrison, & Connor, 2015; Ponitz, Rimm-Kaufman, Grimm, & Curby, 2009; Skinner, Kindermann, & Furrer, 2009). Common measures for assessing student conduct (such as following classroom rules) and learning behaviors in the classroom include time on task, paying attention and displaying effort and concentration, and timely completion of work (Fredricks, 2011). Many researchers have repeatedly confirmed the importance of behavioral engagement for achievement outcomes (e.g., Finn & Zimmer, 2012). In the research on school retention, a lack of behavioral engagement and the presence of student conduct problems are predictive of schooling issues such as absenteeism and premature dropout (e.g., Finn & Zimmer, 2012). Behavioral engagement can be represented differently at different developmental stages. For example, following rules and directions is an important indicator of behavioral engagement among young children at early childhood and lower primary stage and has been used to predict readiness for schooling and future schooling success (e.g., McWilliam & Casey, 2008). During middle schooling or early adolescence, other forms of behavioral engagement such as effort expenditure, attention in the class, and initiating action will be more critical than simply following rules. In addition, behavioral engagement can also differ in relation to the nature of task and characteristics of a learning setting. For example, attendance is an important form of behavioral engagement for after-school activities (e.g., Rose-Krasnor, 2009). However, when the concern is about the completion of homework, effort expenditure and timely completion of tasks are more relevant indictors of behavioral engagement.

Where behavioral engagement is seen simply as students' compliance with classroom rules and behavioral expectations, there may be disjuncture with what energizing, direction, and sustained action they are able to undertake in relation to learning tasks. For example, strict student compliance may not be an appropriate indicator for learning tasks that demand higher-order thinking and processes. Similarly, it is not a good indicator of students' level of enjoyment and interest.

Students can hold low levels of interest while displaying behavioral engagement. There are quietly disengaged students in our classrooms, some of whom elect to "actively make themselves invisible in classrooms" (Dagley, 2004, p. 624).

Emotional Engagement

Emotional engagement involves affective responses people provide in relation to learning. Positive affective responses can include happiness, satisfaction, interest, valuing of learning, a sense of belonging, and formation of positive relationships (Finn, 1989; Voelkl, 1997). Emotional engagement can be examined at different levels in relation to a specific task, learning content, working with peers, responses to teachers, and perceptions about classroom and school contexts. For example, at the subject level, emotional engagement has been measured using items assessing positive feelings, mainly in relation to interest, enjoyment, and valuing of learning (Fredricks & McColskey, 2012). At the school level, or in relation to the membership of a social group, students' senses of belonging and relatedness have been used as indicators of their emotional engagement (e.g., Finn & Zimmer, 2012). Research has shown that these positive feelings are associated with important engagement indicators such as persistence and effort expenditure. Also, emotional engagement is associated with important outcomes including achievement levels (e.g., Pekrun & Linnenbrink-Garcia, 2012), liking of a school subject (e.g., Ng, 2014), and positive attitudes toward schooling (e.g., Pietarinen, Soini, & Pyhältö, 2014). It is obvious that students who are excited about a school subject will develop a positive attitude toward it and continue to engage with the subject. Emotional engagement can be a response to a specific task or a learning object. It also can be developed as a result of the relationship with one's significant others, including parents, teachers, and friends. Warm and supportive relationships are essential for supporting positive emotional engagement (Wentzel, Russell, & Baker, 2016).

Relatively limited attention has been given to negative emotions and their effects on engagement and outcomes. Negative emotions such as fear, anxiety, and boredom are capable of "deactivating" learning (Pekrun, 2006). Students who hold negative feelings about a school subject are likely to spend less time on it, and subsequently, poor achievement levels and negative attitude toward the subject are likely to develop (e.g., Ng, 2014). If negative emotions are developed in relation to one's feelings about school, a weak sense of belonging is expected, and if negative emotional engagement persists, absenteeism and dropout will likely result (Wang, Chow, Hofkens, & Salmela-Aro, 2015).

Cognitive Engagement

Cognitive engagement is the mental investment people make in learning (Fredricks & McColskey, 2012). In an educational context, it is concerned with students' depth of processing, use of relevant learning strategies, and self-regulation. Cognitive

engagement is important for successful and effective management of the learning process, and therefore, it is critical for promoting high performance and learning outcomes. Cognitive engagement has been measured using different self-report instruments that assess students' use of learning strategies, self-regulation strategies, comprehension, and persistence (Greene, 2015). According to Chi and Wylie (2014), a high level of cognitive engagement can be detected when students enter into a constructive dialogue to generate new knowledge beyond what is given or contributed by the partner. This interactive mode of engagement builds on active and constructive contribution from all the learners. Research (e.g., Pietarinen et al., 2014) has shown that cognitive engagement is associated with high levels of achievement. In addition, cognitive engagement plays an important role in mediating the effects of different types of motivation, including levels of self-efficacy and the use of achievement goals on achievement (e.g., Greene et al., 2004). Children who show a high level of cognitive engagement in school work are more likely to sustain their engagement in learning and school activities in the long run (e.g., Ripke, Huston, & Casey, 2006).

Teacher expectation, provision of challenging tasks, and conversational interaction regarding the learning topics promote cognitive engagement (Taylor, Pearson, Peterson, & Rodriguez, 2003). Additionally, students who hold a high level of self-efficacy are more likely to engage cognitively. However, anxiety dampens cognitive engagement. For example, Ashcraft (2002) found that a high level of mathematics anxiety was associated with a tendency to withdraw when the learning becomes challenging. Students who feel anxious about their performance will be less likely to adopt deep learning strategies and more likely to give up on learning.

Cognitive engagement is hard to observe. When students are cognitively engaged, they are concentrated and persistent in their learning. These behavioral expressions of cognitive engagement overlap with behavioral engagement of compliance to classroom rules and norms that expect students to put effort into their work. Another notable issue in cognitive engagement is students' declining motivation and interest in academic work following the transition from primary to middle school (e.g., Vedder-Weiss & Fortus, 2011). This decline is associated with corresponding declining levels of cognitive engagement, as indicated by students' preference for easy tasks, avoidance of challenge, effort withdrawal, and work avoidance.

Social Engagement as an Additional Indicator of Engagement

In addition to the three different dimensions of student engagement, there are other engagement dimensions that should be considered. An important and obvious omission in Fredricks' review (2004) is social engagement. Social engagement is observable when students collaborate with others, share responsibilities, and work together during the learning process (Patrick, Ryan, & Kaplan, 2007). It can also be

recognized when students follow classroom rules and norms (Finn & Zimmer, 2012). As expected, different ways of conceptualizing and defining social engagement can be found in the literature. For example, Rimm-Kaufman, Baroody, Larsen, Curby, and Abry (2015) measured social engagement in terms of students sharing and discussing ideas in their mathematics class. Linnenbrink-Garcia, Rogat, and Koskey (2011) described a social–behavioral dimension of engagement and measured it based on students' collaboration with classmates surrounding classroom tasks. Finn and Zimmer (2012) defined social engagement in terms of students following rules and displaying prosocial behaviors in completing academic tasks. The varied ways of measuring social engagement suggest it can be detected at different levels for a variety of purposes, including meeting social norms and completing academic work in a collaborative setting. In terms of outcomes, Patrick et al. (2007) showed that social engagement in the form of interactions observed during the learning of specific tasks was related to higher grades among fifth graders in learning mathematics. In contrast, students who were less socially engaged were often off-task and engaged in disruptive behaviors, and expectedly, these students did not do as well academically.

The ability to invite, reinforce, and sustain social engagement is critical for promoting collaboration and enhancing communication. Social relationships, social support, and social skills are important enabling factors of social engagement. These three aspects of social engagement are intricately interrelated. Social skills play an important role in initiating social contact, seeking support, and developing social relationships. Social skills are important sociocognitive resources enabling social engagement, as well as promoting engagement in academic work that requires collaboration (DiPerna, Volpe, & Elliott, 2005; see Chap. 4 for details). From a relational perspective, a warm and supportive context provides an inviting environment for learning and practicing social skills. In terms of effects on learning outcomes, the research on social skills has provided accumulative evidence (Domitrovich, Cortes, & Greenberg, 2007; McClelland, Acock, & Morrison, 2006) indicating that they are associated with school success in elementary and preschool levels. Teachers often consider social skills, such as cooperation, as vital for effective learning (e.g., Lane, Pierson, & Givner, 2003; Meier, DiPerna, & Oster, 2006). Similarly, the twenty-first century skills reform agenda has highlighted the importance of cooperation, collaborative, and communication skills. Such skills are also important for effective engagement in group work and collaborative problem-solving. In addition, many intervention and instructional models have taken social skills and interaction as critical components in promoting sustained participation and improving results. For example, reciprocal teaching for reading instruction relies on students' exchanging and sharing to enhance reading comprehension (Palincsar & Brown, 1984). In the context of engagement research, Reeve and Tseng (2011) have shown that students who shared their preferences with teachers changed the way teachers behaved and how instruction was delivered. In ICAP engagement model (Chi & Wylie, 2014), dialogue and interaction are vital for deep learning and are considered the most advanced forms of engagement.

To many, social skills seem to develop naturally, without the need for explicit training. For students with disabilities, social skills training is an essential part of their education. Similarly, for young people who have been marginalized or excluded from mainstream schooling, social skills training forms an important part for their re-engagement, promoting their social well-being and enabling their participation as productive members of society. In Chap. 4, we present a consolidated review of research on social skills and discuss how social skills programs can enhance engagement for all students and, in particular, students coming from disadvantaged backgrounds. In Chaps. 7 and 8, we discuss alternative education programs where social skills play an important role in re-engaging marginalized youths in meaningful learning.

Facilitators of Engagement

Facilitators of engagement are multiple and can originate from both cognitive and social realms. Plentiful research has focused on cognitive facilitators of engagement using motivational variables based on sociocognitive theories. Major motivational variables are concerned about students' levels of confidence, their reasons for learning, needs for autonomy, and the role of personal interest in the process of engagement. Another type of facilitation is social in nature and is derived from people interacting with students and from social settings where students partake as members. These social agents include teachers, peers, parents, and other family members. Their influences on student engagement are channeled through their supports in forms of shared goals, high expectations, and social practices that provide warmth, care, and understanding. They also influence learning engagement through practices they create to govern ways that a learning task is completed and how children and young people are expected to work together. In what follows, we offer a brief review of research on these cognitive and social facilitators.

Cognitive Facilitators

Cognitive facilitators are cognitive attributes or capabilities that enable children and young people to intellectually engage with a task. A lack of appropriate development will stifle engagement in learning and academic work. Research on motivation and engagement has provided a rich foundation for understanding these cognitive facilitators and the work they do to promote and sustain engagement. Among these, the most-researched cognitive facilitators are enablers of self-efficacy, self-determination, achievement goal-setting, and personal interest. Children and young people who are confident, autonomous, goal-oriented, and interest-focused are more likely to engage in learning and sustain their engagement facing challenges and difficulties. Conversely, those who are less confident, who feel controlled, who do not have

clear goals, and who lack a genuine interest in learning will be more likely to withdraw their participation from learning. Research on what triggers these important cognitive facilitators is supported by corresponding theories, including self-efficacy theory, self-determination theory, achievement goal theory, and interest theory.

Self-efficacy is a child's perceived ability or capacity to successfully complete a task within a specific domain or setting. Self-efficacy beliefs affect task choice, persistence, effort, use of strategies, and achievement (Bandura, 1997; Pajares, 1996a, b; Schunk & Pajares, 2005) and are important for promoting student engagement. Children form a sense of self-efficacy in different domains through direct experience, vicarious experience, social persuasion, and physiological indexes (Bandura, 1997). Children who have developed a strong sense of self-efficacy in a specific domain are confident in their abilities and are more likely to actively participate in activities, expend effort, and persist in the face of challenges, difficulties, and even failure. In contrast, children who have a weak sense of self-efficacy will be more likely to show low levels of participation, expend limited effort, and withdraw their involvement following failure or when faced with challenges. A high level of self-efficacy is associated with enjoyment, valuing of learning, use of deep and regulated strategies, better achievement levels, and effort expenditure (Greene, 2015; Pajares, 1996b; Pajares & Graham, 1999; Pajares & Kranzler, 1995; Sakiz, Pape, & Hoy, 2012). In contrast, a low level of self-efficacy is unsurprisingly related to academic procrastination (Steel, 2007), negative emotions such as anxiety (Muris, 2002), and the use of surface strategies. The positive effects of self-efficacy on academic achievement have been widely documented in research (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Diseth, 2011; Pajares, 1996a). Recent research has linked self-efficacy to achievement goals. In this line of research, self-efficacy has shown its protective effects on student engagement where students successfully differentiate the effects of adaptive and maladaptive goals. For example, Liem, Lau, and Nie (2008) found that self-efficacy predicted students' goals for mastery and outperforming others, which in turn were linked with adaptive learning patterns such as the use of deep strategies and valuing of task. In the same study, self-efficacy predicted negatively students' goal to avoid showing a lack of performance, a goal associated with the use of surface strategies, task disengagement, and devaluing of learning mathematics.

Bandura (1978) used the term "reciprocal determinism" to describe the reciprocal interactions between cognitive, behavioral, and environmental factors in affecting psychological functioning. In the context of understanding the relationship between self-efficacy and student engagement, the notion of reciprocal determinism has prompted studies that examined reciprocal interaction using longitudinal designs. For example, Williams and Williams (2010) verified a structural equation model depicting the reciprocal relationship using cohort data from PISA.

Self-efficacy affects the development of relationships. For example, Patrick and colleagues found that self-efficacy was associated with peer relationships and individuals' judgment of their ability to relate with peers (see Patrick et al., 2007). Nevertheless, the relationship between self-efficacy and emotional engagement is rather unclear. Much work in this area has focused on test anxiety confirming that

high levels of self-efficacy are associated with low levels of anxiety (e.g., Bonaccio & Reeve, 2010; Nie, Lau, & Liau, 2011; Putwain & Daniels, 2010). However, few research studies have examined the relationship between self-efficacy and positive emotions such as enjoyment, happiness, satisfaction, and sense of belonging. We also have little knowledge about the relationship between self-efficacy and different forms social engagement.

Achievement goals are students' perceived reasons and purposes for learning and pinpoint why, and how, students engage in learning and achievement (Dweck, 1986). Different goals are associated with different patterns of engagement as indicated by a combination of cognition, affect, and behavior (cf. Ames, 1992; Dweck, 1986). Early studies on achievement goals contrasted the effects on learning, engagement, and achievement of two somewhat different types of achievement goals—mastery versus performance goals. Students' mastery goals represent a focus on learning for the sake of improvement and understanding, whereas performance goals reflect students' attention to achievement and relative ability. A wealth of studies accumulated over the past three decades has firmly established the benefits to learning derived from mastery goals and their associated adaptive engagement patterns such as higher levels of persistence, effort expenditure, task value, and frequent use of cognitive and regulatory strategies. In contrast, performance goals are less adaptive and tend to link with a less engaged pattern of learning characterized by low levels of persistence, effort withdrawal, and use of surface strategies (e.g., Ames, 1992; Ames & Archer, 1988; Dweck, 1986; Meece, Blumenfeld, & Hoyle, 1988; Nolen, 1988).

The contrasting effects of these two types of goals on learning and achievement have provided an empirical basis for forming a mastery goal perspective that promotes the use of mastery goals per se to optimize students' motivation to learn (Midgley, Kaplan, & Middleton, 2001). However, the effects of performance goals on learning and achievement are open to debate. Subsequent research (e.g., Barron & Harackiewicz, 2001) that fine-tuned performance goals into approaching and avoidance orientations showed that detrimental effects of performance goals were confined to those with an avoidance orientation such as avoiding showing a lack of ability, while positive effects were found among performance goals with an approaching orientation such as seeking a good grade. Building on this empirical foundation, an important point of debate (Harackiewicz, Barron, Tauer, & Elliot, 2002) has emerged regarding additional benefits of pursuing approaching forms of performance goals alongside mastery goals. This sparked research on multiple goals, i.e., simultaneous adoption of performance-approach goals and mastery goals, and subsequent studies (e.g., Barron & Harackiewicz, 2001; Pintrich, Conley, & Kempler, 2003) have reported positive effects on learning derived from holding multiple goals. Students who hold multiple goals are more likely to endorse an engaged learning pattern characterized by the use of deep learning strategies and various forms of regulatory strategies, high levels of control and self-efficacy, and positive attitudes including learning interest and valuing of learning (e.g., Kolić-Vehovec, Rončević, & Bajšanski, 2008; Luo, Paris, Hogan, & Luo, 2011). However,

multiple-goal learners do not necessarily have better results, which may be related to need to manage different goals simultaneously (Ng, 2008).

Studies on achievement goals in the past three decades have confirmed the significant role of students' perceived reasons and purposes for learning and how these goals trigger different patterns of engagement. Ames (1992) argued that classroom structures in terms of task design, evaluation, and grouping practices communicate messages regarding the teacher's goals for their students. Those who perceive that their teacher focuses on learning and understanding are more motivated and engaged in learning. In contrast, students who perceive that that their teacher is concerned more about performance and competition will be likely to show diminishing motivation and less engaged patterns of learning (Meece, Anderman, & Anderman, 2006). More recent research has established the relationship between parents' behavior and students' achievement goals. Parents' supportive behaviors, rather than monitoring of students' academic work, are more likely to lead to the development of mastery goals (Régner, Loose, & Dumas, 2009). This may be related to parents' and teachers' goal focus because research shows that parents who hold mastery goals, i.e., wanting their children to focus on learning and improvement, tend to provide support to their children's autonomy, while those focusing on performance-approach goals display more controlling parental behaviors (Mageau, Bureau, Ranger, Allen, & Soenens, 2016).

Autonomy, competence, and relatedness are basic psychological needs that self-determination theory considers critical for promoting student engagement. Autonomy refers to choice that students can make freely during the learning process. Competence refers to the feeling that one can successfully produce desired outcomes. Relatedness denotes the connection one links with significant others. Students who feel a strong sense of autonomy, competence, and relatedness are more likely to participate actively in learning (e.g., Reeve, 2009). In the absence of these senses and perceptions, active and deep engagement is unlikely to occur. In addition, low levels of autonomy have been related to anxiety, problems of school adjustment (Ryan & Connell, 1989), and different problems associated with psychological maladjustment (Ryan, Deci, & Grolnick, 1995). Increasing choices and options during the process of learning are crucial in promoting a sense of autonomy. Research (e.g., Jang, Reeve, & Deci, 2010) has shown that teachers who support students' autonomy in learning are more likely to engage their students in learning about learning. High autonomy support at the school level produces a stronger sense of belonging. Contrarily, teachers who use controlling approaches or tactics such as engagement–contingency rewards, deadlines, threat, or coercion often trigger negative responses including effort withdrawal and negative emotions such as anxiety. Similarly, parental practices that support children's need for autonomy, such as listening to them, acknowledging their feelings, and providing options, are conducive to developing autonomy and self-determination of their children. In contrast, perceived low levels of parental autonomy support are likely to have negative outcomes such as high-risk behaviors (Williams, Cox, Hedberg, & Deci, 2000). However, little is known yet about whether peers and close friends can contribute to supporting these psychological needs.

Students' reasons for learning, including external, introjected, identified, and integrated categories, are important for developing autonomous motivation. Students who have identified and integrated reasons for learning are more autonomous than those who learn for external or introjected reasons that come often with pressure and control. Reeve (2007) proposed that promoting these autonomous motivations will facilitate the development of agentic engagement. Reeve claims that agentic engagement can be seen when students contribute actively to the instruction flow by initiating a process to pursue options they prefer, enhancing their choices, preferences, and meaningful learning (Reeve & Tseng, 2011).

Interest as a motivational variable facilitating engagement involves both emotion and cognition. Renninger (2009) argued that developing interest in a subject area requires not just arousal of positive feelings such as enjoyment but also the development of knowledge and value. Thus, interest combines both cognitive and affective properties. Interest is important to learning and achievement as it promotes and sustains learning motivation. For example, interest is reciprocally related to self-efficacy, self-regulation, and valuing. In other words, students who hold strong interest in a subject area are more likely to feel efficacious and to regulate and value their learning, which subsequently, will reinforce and strengthen their interest (e.g., Frenzel, Goetz, Pekrun, & Watt, 2010; Hidi & Ainley, 2008; Nieswandt, 2007).

Expectedly, such students will be more likely to remain engaged and achieve better outcomes (e.g., Lee, Lee, & Bong, 2014; Rotgans & Schmidt, 2011), as the associated learning has become personally significant (Krapp, 2003).

Research on learning interest has distinguished between situated and individual interest (Renninger & Hidi, 2011). Situated interest is short-term, unstable, and a momentary experience of positive feelings and increased attention to a learning task or situation. In contrast, individual interest is a long-term, stable, persistent, and well-developed predisposition to re-engage in a subject matter or learning that one values. Students who find a specific task or situation interesting but do not consistently feel that way are said to have situated interest. The source of situated interest is derived from novelty, challenge, and other appealing features such as surprise and uncertainty associated with a learning task or a learning situation. Such tasks or situations attract attention (Schaeffner & Schiefele, 2007) and stir up sparks of enjoyment and excitement. While this form of interest is short-term, it can be developed into a permanent type of interest that forms part of personal attributes if situated arousals of interest are frequently encountered.

Hidi and Renninger (2006) and Krapp (2003) describe how situated interest can be developed into a permanent form of individual interest through stages involving triggered situated interest, maintained situated interest, and emerging and stabilized personal interest. Students' engagement may differ as a result of the stage of their interest development (e.g., Tsai, Kunter, Lüdtke, Trautwein, & Ryan, 2008). Those at an initial stage are less likely to expend a substantial amount of time and effort on a task based solely on a basic level of appeal such as novelty. If the learning becomes too challenging or unappealing, these students will readily quit. In contrast, students who already have developed a stable personal interest in a subject area can be expected to spend a significant amount of time and effort to learn.

More significantly, they persist in face of challenge, hold positive attitudes about their learning, and often seek opportunities to further their understanding. In other words, students who hold an individual interest in a subject area or a topic will actively seek opportunities to re-engage in the topic areas that they value and know well. High levels of self-regulation can be found during the course of engagement and learning when students have personal interest in a specific domain or topic. This also means that students will be able to manage repetitive and boring learning tasks or situations in areas of personal interest. Educational research on interest has shown that situated interest can be triggered in a range of ways, using novel tasks and hands-on and problem-based designs and addressing personal preferences (Høgheim & Reber, 2015; Renninger & Bachrach, 2015; Walkington & Bernacki, 2014). Sustaining students' triggered situated interest in a specific learning area can turn momentary arousals into enduring predispositions to learn and engage in a specific area. While attention and concentration in class can be taken as observable engagement with interest, students who display such forms of behavioral engagement may not necessarily hold genuine interest in learning (Renninger & Bachrach, 2015). Promoting students' valuing of task and a mastery focus in learning facilitates their development of enduring interest, resulting in different forms of sustained engagement including persistent pursuit through subject and career choices (Canning & Harackiewicz, 2015; Harackiewicz & Hulleman, 2010; Harackiewicz, Rozek, Hulleman, & Hyde, 2012).

Relationship Between Motivational Facilitators of Engagement

Research has shown that while these major cognitive facilitators of engagement are significant in their own right, their relative importance in promoting and enabling engagement remains elusive. Limited research has considered them simultaneously within a single study. This probably is related to the fact that these cognitive facilitators are derived from motivational theories that focus on different sets of variables or constructs. While there have been some studies (e.g., Harackiewicz & Hulleman, 2010) that examined the interrelationship between these facilitators, sustained effort is required to develop an empirical foundation that is multi-theoretic using research designs sensitive to changes and reciprocal relationships. Such research effort would provide important insights into the relative role of these motivational facilitators on engagement and allow for an examination of the effects of mediators and moderators. Group-level moderator variables including gender, ethnicity, socioeconomic status, culture, and race are an important concern for future research. First, a majority of the research work in relation to these cognitive facilitators has been conducted with middle-class student samples from Euro-American countries. Using student groups with low SES backgrounds will provide additional understanding of the operation of these motivating variables and how SES moderates effects in

learning engagement. For example, Guthrie, Coddington, and Wigfield (2009) have shown that African American students' engagement in reading is constrained by avoidance motivation. Including moderator variables such as race, culture, and gender characteristics will allow for a better understanding of existing findings and the breadth of areas to which these findings can be applied. For example, performance-approach goals are not consistently linked with achievement levels among samples of Western students. In contrast, these performance concerns are often associated with students' achievement levels among Asian students who learn within a competitive environment. In addition, extending the conceptualization and research models to include a range of important variables can improve our understanding of these motivational facilitators and examine their roles in bigger motivation–engagement model. Third, there is need to focus on intervention and examine what makes it work—and for whom. This type of research is urgently required for students from disadvantaged backgrounds, and their active engagement necessitates a strategic and coordinated support informed by research evidence.

Social Facilitators

Social facilitators refer to social conditions, interactions, and relationships that promote engagement. These conditions, interactions, and relationships are constructed and co-constructed by children and social agents, including peers, teachers, parents, family members, and members of immediate and wider communities. This network of social agents operates in embedded contexts critical for supporting engagement in learning and other activities. Bronfenbrenner's ecological model (2009) provides a theoretical framing to understand these embedded contexts. At the micro-context, children interact with peers and teachers in the classroom or other learning settings including various social media and online platforms. How children engage is also influenced by family situations, relationships with parents, and family members who provide children with access to important learning resources, modeling of how these resources can be used and instilling value orientations that either support or hinder student engagement in specific learning domains. At the general level, members from relevant communities play a role in channeling children's interest and focus, providing resources, and attaching importance to different forms of learning and engagement. Below, we provide an overview of research findings regarding the effects of these social facilitators on engagement.

Peer Influence

Peer influence becomes more salient during adolescence when young people increasingly spend more time with friends and develop independence from parents. Research (e.g., Kindermann, McCollam, & Gibson, 1996; Ryan, 2001) on peer as a socialization context provides converging evidence about the importance of peer

relationships, support, and affiliation in promoting personal well-being, school engagement, and achievement. Epstein's seminal study (1983) showed that socializing with friends who feel positively about school enhances a student's positive affect and satisfaction toward school. Similarly, Berndt and Keefe (1995) found that adolescent students who thought their friends were engaged positively in school increased their own involvement. More recently, Ryan (2001) found that one's peer group context predicted seventh graders' enjoyment of school and achievement. Kindermann (2007) reported findings showing that sixth graders' peer group engagement characteristics at the beginning of the year predicted their end of year's level of engagement measured in terms of a range of behaviors including concentration and attention in the classroom. In other words, research shows that befriending and being befriended by engaged peers promotes engagement. In addition, research also shows that peer acceptance is associated with academic achievement (Cillessen & van den Berg, 2012), while peer rejection is linked with declining achievement (Véronneau, Vitaro, Brendgen, Dishion, & Tremblay, 2010).

Peer influence on engagement is important in the context of instruction and classroom interaction (Wentzel & Watkins, 2011). For example, friends who clarify teachers' instruction and share work promote engagement with learning (Wentzel, Battle, Russell, & Looney, 2010). Low-achieving students can benefit from interacting with, and talking to, more capable peers (Cooc, Kim, & Graham, 2017).

An important consideration in the research of peer influences is the issue of selection because there is a tendency for children to select friends who are similar to themselves. Where this happens, peer influence on engagement is confounded with personal selection (Ryan, 2001). In this sense, children's engagement or disengagement should not be conceptualized solely as a direct influence by peers but is represented better as a dynamic reciprocal relationship involving personal choices. Another consideration is the combined effect of multiple peer groups on student engagement. What we know regarding how students handle conflicting pulls derived from engaged and disengaged peers during the learning process is relatively limited. An important set of research questions hanging over this shortfall demands exploration of the conditions and factors that enable students to align with engaged peers and continue their engagement while managing distraction from disengaged peers. Students' self-regulation and achievement goals may play an important role in this context. In addition, social skills will be instrumental for negotiating engagement amid distraction and promoting effective social engagement for working with engaged peers.

Teacher Influence

It is widely acknowledged that teachers and teaching form an important setting for understanding student engagement (Skinner & Belmont, 1993). Effective instruction supports student engagement. For example, Gillies and Baffour (2017) found that effective science teachers who promoted engagement spent a significant amount of time interacting with students using multimodal resources in science learning. The simultaneous provision of challenge and support facilitates engagement

(Shernoff et al., 2016). Aside from teachers' instructional practices, their influence on engagement can be examined for its effect on how classroom social and learning environments are constructed. Research on achievement goals indicates that teachers who help students focus on mastery goals or create a mastery-oriented learning environment are able to support students' effort expenditure, interest, and enjoyment as well as the use of deep learning strategies (Ames, 1992). Using Ames' proposed target framework (1992), a mastery-focused learning environment can be promoted in relation to six important dimensions, namely, designing a learning task, sharing of authority and control, recognizing effort expenditure, enabling group work, evaluating progress and improvement, and providing sufficient time and support. Subsequent studies (e.g., Friedel, Cortina, Turner, & Midgley, 2007) have shown that a mastery-focused environment motivates students' engagement in learning and promotes persistence and effort expenditure. Research adopting a self-determination perspective indicates that the provision of support addressing students' needs for autonomy, competence, and relation stimulates the development of self-determination, intrinsic motivation, and learning engagement. For example, Reeve (2013) found that self-determination-oriented classrooms encourage students' agentic engagement enabling them to voice their preferences and to contribute to a learning environment that supports their interests, needs, and engagement. These studies and findings provide convergent empirical evidence verifying the importance of corresponding cognitive facilitators in promoting engagement, suggesting that the effects of teacher influences are mediated through student–teacher interactions and students' perceptions about what their teachers value.

This brings our focus to student–teacher relationships, another aspect of teachers' channels of influence on students' engagement (Roorda, Koomen, Spilt, & Oort, 2011). Research indicates that teachers play an important role in providing emotional support to students. When teachers are responsive, warm, caring, and sensitive to students' need, students feel accepted and develop a strong sense of attachment. Research has also shown that teachers' emotional support is related to students' reported levels of enjoyment and effort expenditure. For example, adolescent students who considered their mathematics teachers emotionally supportive were more likely to enjoy learning mathematics (e.g., Sakiz et al., 2012). Engels et al. (2016) provided longitudinal evidence supporting the association between positive teacher–student relationship and behavior engagement. However, the quality of student–teacher relationship is highly variable. This suggests that the study of student–teacher relationship needs to be grounded in specific classroom contexts.

School Influence

School, as a social setting, exerts important influences on student engagement. Finn's (1989, 1993) model of engagement places a significant role on identification with school and positive school experiences. Feeling accepted and having a sense of belonging are important (Osterman, 2000). Students who feel safe at school will be more likely to engage in classroom learning (Côté-Lussier & Fitzpatrick, 2016).

A greater sense of belonging is associated with higher levels of expectation of success, effort expenditure and valuing of academic work (e.g., Roeser, Midgley, & Urdan, 1996; Anderman, 2003), and lower levels of anxiety and loneliness (e.g., Ozer, 2005; Shochet, Dadds, Ham, & Montague, 2006).

School factors such as school policies relating to the handling of bullying and disciplinary matters send important messages to students about behavioral expectations and safety. These school factors contribute to the development of a school climate wherein teachers and students share their beliefs and values that shape their interactions and understanding of accepted behaviors (Kuperminc, Leadbeater, Emmons, & Blatt, 1997). In a systematic review, Wang and Degol (2016) advanced a multidimensional understanding of school climate comprised by academic climate (ways that learning and teaching are promoted), safety (including physical and emotional security, order, and discipline), community (quality of interactions between members), and institutional environment (referring to conditions such as quality of physical facilities and availability of resources). Their review concludes that school climate is an important factor contributing to academic success, peer relationship, and psychological well-being.

School climate is not an objective entity. Students' perceptions play an important role in mediating the effect. For example, Ripski and Gregory (2009) found that students' collective perception of a hostile school climate predicted lower levels of individual engagement and reading achievement levels. In particular, students' perceptions of victimization negatively predicted individual engagement and lower levels of reading and mathematics achievement. In their study, individual engagement was measured using items assessing classroom behaviors including attention in class, completion of homework, and tardiness in classwork.

Limited attention has been given to the role of school principals in promoting student engagement. The lack thereof is likely due to a belief that student engagement is affected predominately by classroom and instruction practices and that many school principals contribute limited face-to-face activity to these practices. Nevertheless, there is some empirical evidence attesting to the effect of principals' leadership on student engagement. For example, using a large survey sample, Leithwood and Jantzi (2000) found their leadership had a significant relationship to student engagement. Quinn (2002) conceptualized the effect of principals using instructional leadership as a basic tenet and reported a significant relationship between principals' leadership and the teachers' instructional practices that promoted student engagement. In addition, Price (2015) showed that the principal–teacher relationship interrelated with teachers' beliefs about trust and support in school, features that subsequently were important in developing student engagement.

Familial and Community Influences

Parental involvement in school and student learning plays an important role in engagement. Fan and Williams (2010) found that parents who were involved in student learning, including providing advice regarding important learning

decisions, communication with teachers, and keeping in contact with the school, predicted whether students spent time studying, worked hard, and persisted when facing difficulties. There is a developmental component of parental involvement, which has implications for fostering parental practices and relationships with children. Different types and levels of parental involvement are expected for children at different ages and levels of schooling (Wang, Hill, & Hofkens, 2014). While parents' direct involvement, such as helping with homework, is expected among younger children, processes promoting parental academic socialization, such as discussing subject choices and importance of learning for future, are more important during their sons and daughters' adolescence (cf. Hong & Ho, 2005).

Additionally, effects of parental involvement may depend on critical variables such as parental practices, parental goals, and parent–child relationships. For example, authoritative parental practices, including high expectations for academic achievement and frequent interactions, are related to students' school adjustment, their willingness to put effort into learning (Simons-Morton & Chen, 2009), and prevention of school dropout (Blondal & Adalbjarnardottir, 2014). Simons-Morton and Chen (2009) found that such parental practices alleviated negative influences from misbehaving friends. Hill and Wang (2015) showed that students' aspirations, engagement, and academic pathways are highly associated with parental practices (monitoring, warmth, and support for autonomy). Parents' goal focused on learning and improvement is predictive of students' mastery orientations and their behavioral engagement (Gonida, Voulala, & Kiosseoglou, 2009). Nurturing parent–child relationships can also contribute to student engagement. For example, Murray (2009) found that it predicted students' self-rated level of school engagement, competence, and reading achievement.

Social bonds to a community promote behaviors and outcomes valued by community members. Hirschi's (1969) theory of social control includes four types of social bonds – attachment, commitment, involvement, and beliefs. When these bonds are strong, individuals will align their behaviors to the norms and values important to the community. When they are weak, it is more likely that individuals will withdraw from activities and behaviors valued by the community. Social bonds and the development of a community of learning are critical elements in alternative education provision for disenfranchised youth. Research in this area has shown the importance of providing support, safety, and acceptance in an alternative education site where young people are given a second chance in education. Successful cases are characterized by the creation of learning communities to which marginalized youths can experience feelings of attachment and acceptance as contributing community members (Wilson, Stemp, & McGinty, 2011).

Service learning is another pedagogical arrangement that connects community engagement and school learning. For example, Reinders and Youniss (2006) showed that students who engaged in community service and interacted with local people in need improved their prosocial behaviors and intended to engage in future civic pursuits. A meta-analytic review shows that service learning promotes civic engagement, social skills development, positive attitudes toward learning, and academic performance (Celio, Durlak, & Dymnicki, 2011).

Combined Effects of Social Facilitators

Based on our brief review, it can be assumed that each social facilitator should play a unique role in affecting engagement (independent effects). When combined, different social facilitators may enhance or dampen effects of others in the combination (interactive effects). For example, teachers may play an important role in buffering or dampening negative effects originating from a student's history of peer rejection and limited parental involvement regarding learning engagement. Parental support in terms of warmth and affection can moderate the effects of peer influences (e.g., Marion, Laursen, Kiuru, Nurmi, & Salmela-Aro, 2014). For example, Espinoza, Gillen-O'Neel, Gonzales, and Fuligni (2013) found that negative effects of peers on academic aspirations operated when there was a lack of parental support. Vollet, Kindermann, and Skinner (2017) showed that peer influences on student engagement were dependent on teacher involvement. They found that the most engaged students were those who received support from both their peers and their teacher. Students who showed sharp declines in engagement were those who were in friendships with disaffected peers and had teachers who were uninvolved with their learning. From their study, we draw a suggestion that social agents may work together to create a powerful social context to promote and sustain engagement and achievement.

An important focus for research is how social facilitators derived from different social systems might work together to support students who find it hard to engage in learning. While extant research continues to report the importance of social agents in each respective social system to support learning and engagement, more attention is required if we are to look meaningfully into how their activities can be coordinated to provide stronger support. Research on alternative education is moving in this direction, with the success of alternative education programs often arising from coordinated supports derived from multiple and interacting social systems including teachers, parents, peers, and community members. Mainstream schools have much to learn from the success of these alternative education programs in exploring how coordinated supports can be solicited from different social agents to promote productive engagement. Chapters 7 and 8 provide a discussion of alternative education programs in Australia and explain how social facilitators of engagement from different social agents work together to re-engage marginalized youths.

Current Research Models

Research on engagement is diverse and multifaceted. In reviewing research related to facilitators and indicators of engagement, we noted that different definitions and measurements have been used. In addition, research focuses on different aspects of engagement. It is therefore difficult to generalize the results to student groups with various age, gender, and cultural characteristics. Despite these issues, past research

on engagement can be aligned with one of the three heuristic models: models of engagement that are process-focused, those that are outcome-focused, and those that are integrated. In each case, engagement is central, and the focal concern is to establish its relationship with a set of key variables, in terms of what predictive ability, outcomes, or both might be expected and described. These models are not exhaustive. Our objective in presenting them is to highlight major lines of thinking in order to develop a foundation for critical reflection and for advancing our understanding of engagement as it applies to the learning and development of students coming through from disadvantaged backgrounds.

Facilitator-Focused Model: Engagement as a Desired Outcome

This line of thinking pertains to what contributes to or facilitates engagement. Engagement is understood as an important outcome on its own. Using this model, researchers have examined various enablers and antecedent variables that facilitate engagement. As previously discussed, these facilitators originate from two main sources, i.e., from students' own cognitive and motivational capabilities and from social conditions and supports derived from social agents and the learning environments created by these agents. Theorization of motivation and cognition has provided a strong foundation for developing research along this line of thinking. Using sociocognitive theories of this motivation, research in the past several decades has marked out a linkage between important motivational variables and engagement. This concerted effort has established that motivation and engagement are highly related and that motivation can facilitate engagement. Skinner and Pitzer (2012) stated that "engagement is the visible manifestation of motivation" (p. 135). Other motivation–engagement researchers generally are supportive of the crosscut features of the interconnection, agreeing that motivation underpins engagement while maintaining different ways to demarcate the two as variables in research. Over the past few decades, research in motivation has provided convergent support that cognitive facilitators, as identified in the previous section, are very important. Research on social facilitators is on the rise, and this has established the significant role of social context and various social agents in motivating engagement.

Outcome-Focused Model: Engagement as a Mediator

The outcome-focused model is particularly attractive to policy-makers and educators interested in using engagement to heighten educational achievement and to resolve educational problems and issues. In an outcome-focused model, engagement is either a predictor variable or a mediating variable leading to desired outcomes. In the literature of engagement, many studies have shown that different indicators of engagement are linked closely with important outcome variables

including achievement levels, reduced dropout rate, improved health conditions, well-being, and sense of belonging. In the absence of engagement or when disengagement dominates, negative outcomes can be expected. The logic looks rather simple. However, attention is required to develop viable and convincing explanations needed to build a feasible and sustainable theory of engagement that leads to improved outcomes. This theoretical endeavor includes specifying clearly, and convincingly, the processes and mechanisms whereby engagement promotes specific desired outcomes. At this stage, the outcome-focused model remains a form of confirmed association without justified causation.

Integrated Model: Engagement as Both Mediating and Outcome Variables

An integrated model of engagement is located where engagement is conceptualized as both a mediator of outcomes and an outcome variable itself. This complex linear model builds on the previous two models and attempts to examine interrelationships between a large set of variables in a systematic way. A well-articulated research model based on sound theoretical and empirical justifications is required for an integrated model to enable the identification and examination of a suite of hypotheses deciphering its complexity. Most integrated models incorporate three stages of variables. For example, Reeve and Tseng (2011) built a structural equation model simultaneously explicating the linkage between students' satisfaction of psychological needs, four dimensions of engagement (behavioral, cognitive, emotional, and agentic), and achievement levels. In this model, students' engagement was affected by the degree to which their needs for autonomy, competence, and relatedness were perceived satisfied. Agentic, cognitive, and emotional engagement acted as mediator variables that significantly predicted achievement levels. A study by Skinner, Furrer, Marchand, and Kindermann (2008) further exemplifies a three-stage model. Based on self-systems framework, they examined the interrelationship between teachers' autonomy and relational support (Stage 1); students' sense of autonomy, competence, and relatedness (Stage 2); and finally indicators of engagement comprised by cognitive and emotional dimensions (Stage 3). Testing of models that integrate more than four or more stages is rather limited, likely due to the complex relationships involved in model building. Another type of integrated model focuses on the reciprocal interaction between students' engagement and important factors and conditions present in their learning environment. For example, Skinner and Belmont (1993) confirmed the reciprocal relationship between teacher behavior and students' behavioral engagement. Engels et al. (2016) found that a positive teacher–student relationship was reciprocally related to students' behavioral engagement over time.

Taken together, these linear models of engagement are dominant designs guiding research studies in the field. They signify an input–output thought process, with

engagement conceived as an important variable at both ends. As an input, engagement is an independent variable or predictor variable leading to desirable outcomes. As an output, engagement is part of a motivation–engagement system where cognitive and social facilitators promote and sustain the operation and development of different forms or dimensions of engagement. Much has been done to clarify these endpoints of the system. Our concern is the limited research attention and effort on the hyphenation, i.e., the link between input and output. That link signifies important individual, situated and interactive processes, and mechanisms that facilitate engagement (or induce disengagement), which in turn leads to desired outcomes (or negative outcomes in the case of disengagement). By focusing on the complex processes of engagement, we can better understand how the facilitators work and under what circumstances their effects may be compromised. Additionally, this focus will contribute to understanding how and why engagement leads to specific outcomes and in what ways it can be taken as an anchor for developing interventions to promote these outcomes. In light of the purpose of this book, looking to research on the complex process of engagement is essential for understanding and explicating conditions and processes that may have prevented students from disadvantaged backgrounds from productively engaging in learning, and the extent of any allied disengagement may have contributed to issues such as underachievement, early dropout, and failure to thrive in schooling and post-school life. In doing so, we are able to avoid a deficit perspective that affords most of the blame to individual students from these backgrounds without playing sufficient attention to barriers and constraints that pervasively hinder their engagement.

Beyond the Current Models

To understand the complexity of engagement, we discuss three considerations—dynamic conceptualization, students' and teachers' voices, and problematizing engagement. These considerations are critical for advancing research endeavor that will elaborate processes and conditions that influence engagement beyond the conceptualization of linear models.

Dynamic Interplay of Influences

More research attention is required regarding the dynamic nature of engagement using theoretical perspectives sensitive to situated influences and dynamic interplay of personal, sociocultural, and institutional factors that affect engagement (Hickey & Granade, 2004; Lawson & Lawson, 2013). Both outcome-focused and facilitator-focused models are limited to one point of assessment or several of them if longitudinal designs are used. Such designs fail to account for variability of engagement and situational influences during engagement. The variance explained by these

"bookend" models is modest, indicating that still much remains unexplained. Engagement is far more complex than what these models explain. While more studies (e.g., Engels et al., 2016) have explored social and contextual influences on engagement, these influences are often conceptualized as extraneous factors situated outside an individual's psychological framework (Lawson & Lawson, 2013). A dichotomous conceptualization, highlighting the divide between individual and social realms, is not capable of revealing that individual's dynamic interaction with others during engagement or disengagement. Without careful investigation into the dynamic nature of engagement, teachers may be more inclined to consider engagement as an individual's psychological property and fail to see how engagement is being framed and intricately influenced by a large array of external factors and conditions at play with an individual's motivation and other psychological states during the engagement process.

Let's consider several learning situations that teachers often encounter, typically observable when students from disadvantaged backgrounds are involved. First, there are competing commitments and demands that distract students' attention or disrupt their engagement. Such competing demands may originate from situations involving a disruptive peer, unfinished assignments, or other personal concerns such as distracting ideation, for example, planning for after-school activities while ostensibly engaging with a class assignment. Second, there are students who are quietly disengaged. Such students are usually behaviorally engaged and demonstrate a high level of compliance to classroom rules and conduct expectations. However, they may not have genuine interest in a learning task and attempt to engage only at a superficial level in order to finish the task at hand while avoiding their teacher's attention, leading to less effort expenditure and time, and disregard for the adequacy of the task–demand and task–completion match. Third, students' engagement can be variable. It is not uncommon that students may feel like learning one day but not on another. On occasion, students may display conflicting engagement responses. For example, some students may feel interested in a topic the teacher presents but may not be willing to spend time and effort to complete the related assignments. Simultaneous presence of engaged and disengaged responses signifies engagement conflicts that are often experienced by students who have not yet developed a personal interest in a specific learning area. These learning situations highlight contradictions, variability, and complex interplay between engagement responses and situated factors (e.g., observing classroom rules).

There is certainly a need to go beyond linear thinking and research into the dynamic process of engagement. Such research aims not to develop generalizable models; instead the focus of the research is to describe, examine, and elaborate the complex and dynamic nature of engagement within, and across, different learning settings, both in and out of school. For example, engagement researchers need to examine students' completion of a specific task to understand how the engagement process is regulated and how such regulation is related to personal, social, and institutional factors. Students' interactions with peers and their teacher are significant influences affecting the engagement process. Additionally, out-of-school social agents such as parents can play important roles through verbal and other forms of

support they offer at home. The research results derived from studies that aim to understanding the complexity of engagement will provide much-needed research evidence enabling teachers and educators to better recognize what promotes and constrains engagement and to locate social and interactive processes and factors that are instrumental for developing learning environments more conducive to supporting their students' sustained and productive engagement.

Students' and Teachers' Voices

Researchers who study engagement have seldom taken account of students' perspectives and voices. Currently, our understanding of engagement is based on research using self-report instruments assessing engagement in predetermined categories in relation to indicators, facilitators, and outcomes. Students' perspectives and voices rarely have been included in conceptualizing and guiding engagement research. If engagement is understood as students' responses, the best starting point to appreciate this complex construct and to reveal its dynamic nature is to seek students' input. Students as active agents can find ways to go around classroom rules and to behave in ways that are acceptable, as in the case of quietly disengaged students. Their "survival without engagement" practices send a significant warning that engagement research urgently needs to attend to the role of student voice. When students think that their views are ignored or trivialized, they develop indifferent views, or even hostile attitudes, toward a teacher's intended and/or delivered lesson objectives. More importantly, students' perspectives are important for developing effective intervention to meet their needs.

It may be that students' misbehavior in school is a justifiable response to a learning environment where learning and activities are of limited personal relevance and interest. It is unreasonable to expect students to demonstrate a high level of engagement in a learning activity that they do not consider relevant or meaningful. To understand what and why students engage (and disengage) in a particular learning situation or learning task, seeking students' voice is an important point of departure to begin the research process. For example, adolescent students often claim that classroom activities or schoolwork are boring and do not interest them. Instead of taking this as an indication of disengagement, it is important to explore why, and under what conditions, students think this way and what accommodations could be applied. Another important consideration is that students and teachers may have different understandings of engagement. An examination of such differences will contribute to an ecologically valid formulation of engagement and intervention design that promotes and sustains engagement. From the perspectives of students needing to deal with different forms of disadvantage, acknowledging their views and perspectives about engagement is an important step toward their empowerment and liberation as lifelong learners.

Teacher voice is equally important. An important consideration in understanding the role of teacher voice in student engagement is to explore how teachers conceptualize engagement and their roles, and the roles of students, in ensuring all these variables operate as a synchronous phenomenon as often as possible. Using phenomenographic analysis, Harris (2011) identified six different categories of engagement based on interview responses derived from a sample of English teachers in Australian high schools. She labelled these six teacher-perceived engagement types as *behaving, enjoying, being motivated, thinking, seeing purposes and owning learning*. The results indicate that these English teachers focused on behavioral and cognitive dimensions of engagement with somewhat lesser emphasis on emotional engagement and no consideration of social engagement. The limitations revealed by these data seem important not only where teachers and students deal with content such as drama, music, and language studies that heavily emphasize student interaction and group work but in all study domains where the power of interaction is a force for better access, enablement, and participation in opportunities to learn and thrive. In addition to the influence of subject domain, teachers who work with different student groups in contrasting socioeconomic settings may conceptualize student engagement in different ways, and hence their expectation of students' contributions and participation may differ. For example, teachers who work with marginalized students in a site that offers alternative education will be likely to have a rather different set of measures for assessing behavioral engagement compared to teachers in the mainstream schools from which many of these students have been suspended or expelled. In the same vein, teachers who teach students with a disability may assess, activate, and reward social, behavioral, emotional, and cognitive engagement differently when compared to their peers working only with students without disabilities.

Engagement Can Be Problematic

Current thinking has taken engagement as a positive construct that can elicit positive responses and lead to desirable outcomes without considering sufficiently negative consequences associated with engagement. Engagement itself sometimes can be a double-edged sword bringing both positive and negative consequences. For example, valuing a task, or valuing performance in a task, a form of emotional engagement, will elicit effort expenditure. Nevertheless, valuing is also associated with anxiety. Several research studies have reported this association, suggesting that students monitor their engagement in such a way that anxiety is kept at a manageable level. Another example of negative consequences is the association between engagement and peer rejection. Children who behave and engage appropriately may be described by their peers as "teacher's pets," "nerds," and "acting white," depending on how their peers perceive engagement. In a longitudinal case study (Blackberry & Ng, 2016), we have documented how an indigenous Australian Year 5 student disengaged in reading as result of her group identity. As a member of a non-reader

group, this Aboriginal girl deliberately hid her interest in reading and refused to read in the class. These behaviors were the result of prior experiences of reading in her class that involved peer rejection by her own indigenous classmates and imperilled her ongoing identification with them as a peer group.

Current research in engagement has seldom problematized engagement. In the context of researching engagement among students coming from various disadvantaged backgrounds, a fundamental issue that makes engagement problematic is goal conflict, i.e., the differences between what teachers or parents want their children to achieve or focus on and the goals held by the students. Engagement in the context of goal conflict represents a negotiated outcome that is intricately tied with values, norms, and expectation that different players hold and share. In this context, when teachers complain that students are disengaged, it means that these students do not value the learning goal set by the teacher and they do not do what is expected of them by the teacher and peers complicit in pursuit of the teacher's goal. From students' perspectives, their failure to spend effort and time on an academic task set by the teacher indicates that they do not value the task or that they have other goals or priorities that are not consistent with the one assigned by the teacher or parent. Goal conflicts therefore may beget disengagement or superficial engagement, if such differences cannot be resolved.

Two levels of dynamics, personal and contextual, may complicate the goal conflict process that students from disadvantaged backgrounds frequently experience. At the individual level, these students may consider themselves lacking the required levels of confidence, knowledge, and skills and therefore withdraw their effort, likely resulting in low levels of achievement and making future engagement difficult and disengagement the preferred course of action. Many students from disadvantaged backgrounds are likely to be trapped in such a vicious cycle of disengagement due to their belief focus on personal limitations and a lack of support. At the level of person–task interaction, these students' engagement is challenged by issues originating in their own personal limitations. When working on a specific learning task, they may worry about their abilities and whether they can finish the task in an acceptable and timely manner. More significantly, many have shown limited interest in learning tasks assigned to them by their teacher.

Their interaction goes beyond the task level to involve other individuals within the learning setting, which provides a context that often constrains their engagement. We have seen how peers distract each other in learning, which often invokes teacher intervention, control, and disciplinary actions. Research (e.g., Skinner & Belmont, 1993) warns us that teachers often inadvertently reinforce disengaged responses from their students. Teachers may provide insufficient support to disengaged students thinking that they are not keen to learn, or they provide these students with a diet curriculum to tailor tasks ostensibly to their low performance levels. While some help can be derived from this type of teacher' response, ironically, such practices aggravate the problems of underachievement and disengagement, as classwork becomes more mechanical, repetitive, and potentially disengaging. These various forms of context dynamics are not new. Teachers, parents, and students are familiar with them. In a longitudinal interview study (Ng,

Wyatt-Smith, & Bartlett, 2016), we have documented examples of these context dynamics in relation to low SES students' experiences of learning and preparation for national testing on literacy and numeracy in Australia. The low SES students in this study shared their learning experiences, with most voicing their interest in learning from the test while their teachers made negative comments about it, communicating their low achievement expectations, and making limited effort to utilize the test results to promote learning for these students. In doing so, these teachers sent an important message to their students that they were not expected to engage in learning for the test and that they were not expected to learn from it.

From the perspective of linear models of engagement, these personal and context dynamics are complex and hard to reduce to manageable research hypotheses. If, however, engagement is seen as a critical component in addressing entrenched educational issues such as underachievement, disaffection and dropout, and poor preparation for accessing and flourishing in life's opportunities, empowering engagement for students from disadvantaged backgrounds needs to recognize and account for these complex dynamics, understand the processes, and design interventions to address them appropriately. Otherwise, debilitating person and context dynamics will continue. If this happens, students from disadvantaged backgrounds will be further disadvantaged and at risk of marginalization as their "disengaged" responses to learning seem to them, and possibly to their teachers and peers, to be aligned with personal and unchangeable limitations. Urgent attention and action are required to go beyond the current linear research models and focus on the process of engagement or the act of engagement and situate it within person and context dynamics. In conducting such critical research, vulnerable students play a central role in assisting us to improve our understanding of their acts of engagement and disengagement as part of the personal and context dynamics.

A Way Forward

It is important to build on multiple conceptualizations and approaches to engagement research due to the complexity of the issue. One way to deal with the diverse definitions and approaches to engagement research is to distinguish two levels of research, namely, lowercase engagement and uppercase engagement models. Lowercase engagement research will continue to allow researchers to develop and research engagement as part of learning and teaching processes using different measurements and conceptualizations, while an uppercase engagement model will allow researchers to isolate general patterns across different studies to produce a list of central considerations or principles that can be shared among researchers. This proposed way forward is not intended to limit or narrow research to a specific perspective nor to privilege a specific theoretical point of view. Instead, the proposed lowercase and uppercase models will facilitate new and diverse understandings of engagement. In particular, lowercase engagement models will continue to enrich the field using existing and new frameworks and perspectives. Our suggestions to focus

on dynamic interplay of influences, student voice, and problematizing engagement will lead to a better understanding of the complexity of engagement that current linear models only partially reveal. The uppercase engagement model will benefit from the rich pool of research populated by lowercase engagement studies, which will eventually contribute to the development of an engagement theory. Studies and research investigations that were discussed in Chaps. 4, 5, 6, 7, and 8 can be classified as lowercase engagement research. While an uppercase model of engagement is yet to be developed, we have taken the initiative to use an uppercase lens to discuss a list of key considerations for researching engagement and disengagement based on our review of the research in the field. These key considerations can be found at the end of Chap. 1.