

A Motivational Perspective on Engagement and Disaffection

Conceptualization and Assessment of Children's Behavioral and Emotional Participation in Academic Activities in the Classroom

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This article presents a motivational conceptualization of engagement and disaffection: First, it emphasizes children's constructive, focused, enthusiastic participation in the activities of classroom learning; second, it distinguishes engagement from disaffection, as well as behavioral features from emotional features. Psychometric properties of scores from teacher and student reports of behavioral engagement, emotional engagement, behavioral disaffection, and emotional disaffection were examined using data from 1,018 third through sixth graders. Structural analyses of the four indicators confirm that a multidimensional structure fits the data better than do bipolar or unidimensional models. Validity of scores is supported by findings that teacher reports are correlated with student reports, with *in vivo* observations in the classroom, and with markers of self-system and social contextual processes. As such, these measures capture important features of engagement and disaffection in the classroom, and any comprehensive assessment should include markers of each. Additional dimensions are identified, pointing the way to future research.

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In recent years, enthusiasm for the concept of academic engagement has emerged from many lines of theory, research, and practice (Fredricks, Blumenfeld, & Parks, 2004). At its most general, *engagement* refers to the quality of a student's connection or involvement with the endeavor of schooling and hence with the people, activities, goals, values, and place that compose it. Educators are attracted to the concept because (compared to status indicators like student SES or race) engagement represents a potentially malleable proximal influence shaping children's academic retention, achievement, and resilience. Despite emerging consensus about the big picture, however, work on engagement, because it reflects multiple perspectives, has brought with it a profusion of conceptual and operational definitions (Fredricks et al., 2004; Jimerson, Campos, & Greif, 2003; Libbey, 2004; O'Farrell & Morrison, 2003).

At the core of many conceptualizations is a construct that captures the quality of students' participation with learning activities in the classroom, ranging from energized, enthusiastic, focused, emotionally positive interactions with academic tasks to apathetic withdrawal. This feature of engagement is of interest to educational researchers because it reflects the kind of interactions with activities and materials that should produce (or interfere with) actual learning. Even if youth stay emotionally attached or physically present in school, unless they become engaged with learning opportunities, their academic careers cannot be considered a success. This facet of engagement is especially important to motivational researchers, many of whom consider it to be the outward manifestation of a motivated student (e.g., Connell & Wellborn, 1991; Deci & Ryan, 1985, 2000; Skinner, Kindermann, Connell, & Wellborn, in press; Wentzel, 1993).

In this article, we aim to contribute to ongoing discussions about the meaning of engagement in three ways. First, we present a conceptualization of engagement in the classroom that fits within motivational traditions, and distinguishes engagement from disaffection, as well as behavioral features from emotional features. Second, we describe two brief assessments (teacher reports and student reports) designed to capture these four indicators of engagement and we test the psychometric and structural properties of their scores in a sample of third through sixth graders. Third, we examine the validity and utility of scores from these measures by analyzing their connections with each other and with *in vivo* observations of engagement in the classroom, and by exploring their links to a set of self-system and social contextual factors. We do not argue that this conceptualization represents a comprehensive overview of all indicators of engagement, only that the features it includes are core indicators of engagement in the classroom and meet the definitional criteria specified in recent authoritative reviews of the concept (Fredricks et al., 2004).

Conceptualization and Assessment of Engagement Versus Disaffection

The conceptualization of engagement has been part of a larger model of human motivation developed and elaborated over the last several decades (Connell & Wellborn, 1991; Deci & Ryan, 1985, 2000; Skinner, 1991; Wellborn, 1991). To use the model's conceptualization of engagement, it is not necessary to agree with its organismic and contextual assumptions about fundamental human needs. However, research inspired by these assumptions (as well as research conducted outside this framework) has shown that children's active enthusiastic effortful participation in learning activities in the classroom predicts their achievement in and completion of school (e.g., Connell, Halpern-Felsher, Clifford, Crichlow, & Usinger, 1995; Connell, Spencer, & Aber, 1994; Pierson & Connell, 1992; Skinner, Wellborn, & Connell, 1990; Skinner, Zimmer-Gembeck, & Connell, 1998; see Fredricks et al., 2004, for a review). This motivational conceptualization has two notable features: the idea that engagement includes behavioral and emotional participation in the classroom and the idea that engagement requires a conceptualization of its opposite, which we term *disaffection* (Connell & Wellborn, 1991).

Engaged Behavior and Engaged Emotion

Like other motivational conceptualizations, ours includes key markers of engaged behaviors, including effort exertion and persistence. In addition, we include indicators of mental effort, such as attention and concentration. This aspect of engagement has been referred to as *on-task behavior*, *academic behavior*, and *class participation*. Unlike some conceptualizations of engagement, ours also includes engaged emotions. These do not encompass the entire range of positive academic emotions (Meyer & Turner, 2002; Pekrun, Goetz, Titz, & Perry, 2002; Schutz & DeCuir, 2002; Weiner, 1985), only those that reflect energized emotional states, such as enthusiasm, interest, and enjoyment. As opposed to more comprehensive theories of interest (Hidi, Renninger, & Krapp, 2004; Schiefele, 2001) that include personal and situational interest and an analysis of the factors that catch and hold interest, our conceptualization of engagement includes only the state of being caught and held.

Disaffected Behavior and Disaffected Emotion

Conceptually, the opposite of engagement is disengagement, which implies the absence of engagement, including the absence of effort or persistence. Hence, disengagement is typically operationalized as passivity, lack of initiation, and giving up (Murdock, 1999; Vallerand, 1997), sometimes accompanied by the emotions of

dejection, discouragement, and apathy (as depicted in theories of learned helplessness; e.g., Peterson, Maier, & Seligman, 1993). However, there are other pathways to disengagement besides helplessness. Participation can also be undercut by coercion (Deci & Ryan, 1985), exclusion (Merton, 1953; Newmann, 1991), or boredom. A fuller account is especially important in describing disengagement in enterprises from which an individual cannot voluntarily exit, such as school. The normal reaction to helplessness or exclusion is avoidance. However, when physical withdrawal is prohibited, forms of participation may develop that reflect mental or emotional withdrawal, such as frustration, disruptive noncompliance, or simply going through the motions (Finn, Pannozzo, & Voelkl, 1995).

Hence, the motivational conceptualization employs the term *disaffection* (Connell & Wellborn, 1991). Disaffected behaviors include the core behaviors of disengagement—namely, passivity, lack of initiation, lack of effort, and giving up. In addition, they include mental withdrawal and ritualistic participation, such as lack of attention and going through the motions. Disaffected emotions include those that reflect enervated emotion (tired, sad, bored), alienated emotion (frustration, anger), and pressured participation (anxiety). We expected that the range of forms of disaffection included might result in a multidimensional construct.

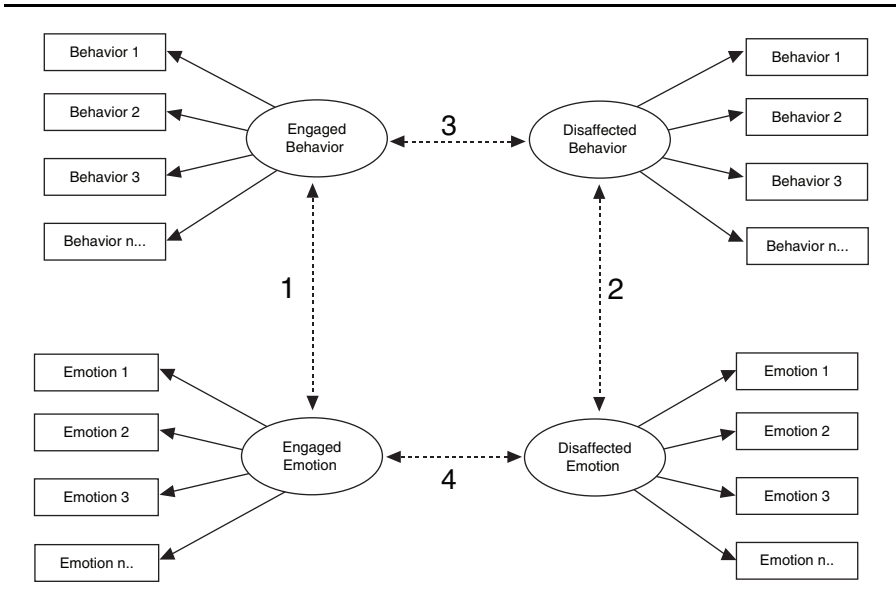
Purposes of the Current Study

Based on a conceptualization of engagement that incorporates behavior and emotion as well as engagement and disaffection, this study was designed to (a) examine the structural properties of scores from brief student and teacher reports of engagement and (b) explore their correlations with one another, as well as with *in vivo* observations of engagement in the classroom and with a set of personal and contextual factors hypothesized to facilitate motivation.

Students and Teachers as Reporters of Engagement and Disaffection

Recent reviews of motivation in education have questioned whether students know what motivates them (e.g., Pintrich, 2003). In our conceptualization, we do not assume that students know why they are motivated, but we do assume that students know whether they are motivated; that is, students are excellent reporters of their own engagement and disaffection. In fact, the state of being engaged or disaffected is extremely salient to people of all ages. Those who interact closely with individuals can also accurately evaluate their motivational states, especially when evaluators' own engagement in an activity is contingent on the quality of the participation of the target individuals. Student motivation is highly valued by teachers; hence, student engagement versus disaffection is very salient to them (Stenlund, 1995). At the same

Figure 1
A Depiction of the Possible Structural Relations
Among the Four Components of Engagement



Note: Arrows 1 and 2 depict hypotheses that behavioral and emotional features of engagement and disaffection are better represented by two dimensions than by one. Arrows 3 and 4 depict hypotheses that engaged and disaffected features of behavior and emotion are better represented by two dimensions than by a single bipolar dimension.

time, however, accurate assessment by teachers is made more difficult if students attempt to conceal their disaffection by masking their negative emotions or by presenting compliant instead of engaged behaviors.

Structure of Engagement and Disaffection

By assessing all four indicators of engagement, we were able to analyze several features of its structure. First, we examined whether the item sets designed to tap each aspect of engagement were unidimensional. We expected that, if multidimensionality were detected, it would be in emotional disaffection. Second, we examined the structure among indicators of the four components, as depicted in Figure 1. We tested whether indicators of the behavioral and emotional features of engagement and

disaffection are better represented by two dimensions or by a single dimension (arrows 1 and 2 in the figure). We expected that they would be better represented by two dimensions that would be highly positively intercorrelated. Next we tested whether indicators of the engaged and disaffected features of behavior and emotion are better represented by two dimensions or by a single bipolar dimension (arrows 3 and 4). We expected that they would be better represented by two dimensions that would be moderately negatively intercorrelated. Finally, we tested markers of all four components at once, expecting that a model of four interrelated dimensions would provide a better fit than one- or two-factors models.

Theoretical Rationale for the Structural Hypotheses

It is not intuitively obvious why the components of engagement and disaffection would not be expected to form a single bipolar construct. The most important reason is that students' engagement in the classroom does not reflect a stable personality trait that should consistently express itself across situations and time. Instead, it is made up of thousands of different interactions between a developing child and his or her changing assignments on different school subjects and days in a fluctuating social context. Reports of engagement, which reflect the patterns of such involvement cumulated over episodes and subjects (e.g., Marks, 2000), would not necessarily be unidimensional; they would likely be more complex and therefore multidimensional (Fredricks et al., 2004). However, even without a unidimensional structure, it makes sense that the components would be related in ways (i.e., behavior and emotion, positively; engagement and disaffection, negatively) systematic enough to allow a meaningful aggregate to be created. Its lowest point would depict negatively toned passivity, which could be considered a risk factor for (or the first step of) dropout, and its highest point would represent enthusiastic energetic participation, found to promote learning and healthy development. Distinguishable components would also suggest that other combinations might be of interest (e.g., Finn et al., 1995; Furrer, Skinner, Marchand, & Kindermann, 2006; Patrick, Skinner, & Connell, 1993).

Correspondence Between Student and Teacher Reports of Engagement

Because engagement and disaffection are both observable and salient, we expected scores from teacher and student reports to be moderately correlated with each other. Given that behaviors are more easily observable, we expected that behavioral components would be more highly inter-correlated than emotional components. In terms of mean level correspondence, we expected students to be more optimistic in their reports of their behavioral engagement, compared to teachers'

reports; we also expected teachers to overestimate the state of students' emotional engagement relative to students' own reports.

Correlations With *In Vivo* Observations of Engagement and Disaffection in the Classroom

Because engagement and disaffection are observable manifestations of motivation, it is easy to assume that direct observations would be the optimal indicator of engagement in the classroom. In fact, some researchers have successfully captured some features of engagement in the classroom through direct observation (e.g., Center for the Organization and Restructuring of Schools, 1992, as cited in Marks, 2000). However, taking the entire body of research into consideration, we conclude that the behavioral features of engagement are more easily captured by direct observations than the emotional features, and the active features (active on-task and active off-task) are more easily captured by observations than their passive counterparts (e.g., Bolstad & Johnson, 1977). That is, it can be difficult to distinguish passive behavior that is off-task from passive behavior that is on-task. It can also be difficult to classify children with a high activity level who show high levels of both actively engaged and actively disaffected behaviors.

Correlations With Hypothesized Predictors of Motivation

We expected that student engagement and disaffection would be correlated with indicators of a variety of individual and contextual processes (Fredricks et al., 2004). Although no study can include markers from all theories of motivation, we included constructs from several theories focusing on individual factors such as perceived control (10 different strategy and capacity beliefs; Skinner et al., 1998), autonomy orientations reflecting four self-regulatory styles (external, introjected, identified, and intrinsic; Ryan & Connell, 1989), sense of relatedness to four social partners (teachers, parents, friends, and classmates; Furrer & Skinner, 2003; Lynch & Cicchetti, 1997), academic optimism and pessimism (Carver & Scheier, 1999; Peterson et al., 1993), goal orientations (Dweck, 1999b; Eliot, 1999; Nicholls, 1984), and reactions following failure (Dweck, 1999a; Skinner & Wellborn, 1997). We also included indicators of six motivationally supportive and unsupportive features of relationships with teachers and parents—namely, involvement/warmth, structure, autonomy support, neglect/rejection, chaos, and coercion (Murray & Greenburg, 2000; Reeve, Jang, Carrell, Jeon, & Barch, 2004; Skinner & Belmont, 1993; Skinner, Johnson, & Snyder, 2005). Each of the constructs has a history of study in its own right, and taken together, they represent markers of the key constructs in the motivational model from which this conceptualization of engagement and disaffection was drawn.

Method

Participants

Participants comprised 1,018 children who had participated in a 4-year longitudinal study on children's motivation in school (144 third graders, 342 fourth graders, 168 fifth graders, and 364 sixth graders, approximately equally divided by gender). Data were utilized from two measurement points: fall (October) and spring (May) of Year 3. Students and their 53 teachers, drawn from a public elementary school in a rural-suburban school district, were predominantly Caucasian, with approximately 5% of the students identifying themselves as non-White. Student socioeconomic status, as determined by parents' level of education and occupation, ranged between working and middle class (for details, see Skinner et al., 1998).

Procedures and Measures

Trained interviewers administered self-report questionnaires to students in their classrooms, in three 45-min sessions. For the questionnaires, respondents used a 4-point Likert-type scale: ranging from 1 (*not at all true*) to 4 (*very true*). Negatively worded items were reverse-coded, and items in each scale were averaged. Score reliability information for each scale, along with 90% confidence intervals (Barnette, 2005), are included in the tables of descriptive statistics. Note that some of the internal consistency reliabilities for the four- and five-item student report measures are below the generally accepted standard of .80, indicating that some of the correlational results may be attenuated due to measurement error (Henson, 2001).

Behavioral and Emotional Engagement Versus Disaffection

Student report assessment. Each student reported on his or her own (a) behavioral engagement, using five items tapping their effort, attention, and persistence while initiating and participating in learning activities; (b) behavioral disaffection, using five items tapping their lack of effort and withdrawal from learning activities while in the classroom; (c) emotional engagement, using six items tapping their emotions indicating motivated involvement during learning activities; and (d) emotional disaffection, using nine items tapping their emotions indicating motivated withdrawal or alienation during learning activities. The items from the current version of the student report measure are presented in Appendix A (Wellborn, 1991; see also Connell et al., 1994; Connell et al., 1995; Furrer et al., 2006; Skinner et al., 1990; Skinner et al., 1998; Skinner, Furrer, Marchand, & Kindermann, in press).

Teacher report assessment. Each student's teacher reported on that student's (a) behavioral engagement, using four items tapping students' effort, attention, and

persistence while initiating and participating in learning activities; (b) behavioral disaffection, using four items tapping students' lack of effort and withdrawal from learning activities while in the classroom; (c) emotional engagement, using four items tapping students' emotions indicating motivated involvement during learning activities; and (d) emotional disaffection, using four items tapping students' emotions indicating motivated withdrawal or alienation during learning activities. The items from the current version of the teacher report measure are presented in Appendix B (Wellborn, 1991; see also Connell et al., 1994; Connell et al., 1995; Furrer et al., 2006; Skinner et al., 1990; Skinner et al., 1998; Skinner, Furrer, et al., in press).

Individual Motivational Factors

Perceived control in the academic domain. Using 10 scales from the Student Perceptions of Control Questionnaire (Skinner, Chapman, & Baltes, 1988; Skinner et al., 1990; Skinner et al., 1998), students reported about their (a) control beliefs, using 6 items tapping their general expectancies about achieving success and avoiding school failure; (b) strategy beliefs, using 25 items tapping their beliefs about the effectiveness of five potential causes for success and failure in school (effort, ability, powerful others, luck, and unknown); and (c) capacity beliefs, using 16 items tapping their beliefs about the extent to which they have access to the four known causes (effort, ability, powerful others, luck).

Sense of relatedness. Students completed four items, each regarding their sense of belonging or connectedness to their teachers, their mothers, their fathers, their friends, and their classmates (Connell & Wellborn, 1991; Furrer & Skinner, 2003).

Autonomy orientation. The measure of academic autonomy comprised 17 items that tapped whether children engage in activities for (a) external reasons, or doing work because of rules or fear of punishment; (b) introjected reasons, or doing work because one "should" and to avoid negative emotions; (c) identified reasons, or doing work because of a desire to understand and learn; and (d) intrinsic reasons, or doing work because it is enjoyable (Ryan & Connell, 1989).

Academic optimism and pessimism. Students responded to 7 items tapping their optimism (e.g., "When I have trouble with a problem, I usually get it right in the end") and pessimism (e.g., "If a problem is really hard, I'll probably miss it.") about success in academic activities.

Goal orientations. Students responded to eight items reflecting the value that they place on learning (e.g., "How much do you care about learning new things in school?") and producing good grades (e.g., "How much do you care about getting

good grades?’’). Performance avoidance goals were not assessed (Elliot & McGregor, 2001).

Reactions to academic challenges. Students responded to 20 items about their reactions when encountering academic difficulties. Four items tapped mastery reactions (e.g., ‘‘When I run into a difficult question, I try even harder’’), five items tapped giving up (e.g., ‘‘If a problem is really hard, I just quit working on it’’), and eleven items tapped negative emotional reactions (e.g., ‘‘When I get stuck on a problem, it really bothers me’’).

Social Contextual Factors

Parent motivational support. Students responded to 16 items depicting their perceptions of the amount of general support provided by their parents, using three scales tapping parent involvement, structure, and autonomy support (Skinner et al., 2005).

Teacher motivational support. Students reported on the level of involvement, structure, and autonomy support that they experienced from their teachers (Skinner & Belmont, 1993): 16 items tapped involvement, including warmth/affection, dedication of resources, knowledge about the student and his or her needs, and dependability; 8 items tapped hostility and neglect; 14 items measured the kind and amount of structure, including clarity of expectations and contingency; 15 items reflected chaos and confusion; 8 items tapped autonomy support, including teacher provision of choice, relevance, and respect; and 13 items tapped teacher coercion and controlling behavior.

Observations of Engagement and Disaffection in the Classroom

Observations were conducted in two fourth-grade classrooms, and focused on 56 children (29 girls and 27 boys). Everyday classroom interactions were videotaped between the 5th week and the 10th week of school; two prior weeks were used for warm-up. Observations were conducted during regular classroom lessons: 35% of the observations were recorded during math, 35% during English (or other language-oriented lessons), 15% during social studies, and 15% during special projects (e.g., preparation and giving of class presentations). Interactions were videotaped according to predetermined random schedules, across periods of 15 school days in each classroom. Each day, a target child was in the camera’s focus for about 20 min. On average, each child was observed for a total of 2 hr, across 8 days (ranging from a low of two times, once in math and once in language arts, to a high of 25 times).

Coding system. The coding system consisted of seven exhaustive and mutually exclusive categories, adapted from systems developed by Charlesworth and Hartup (1967); Horn, Connors, and Well (1986); and Kerr, Zignmond, Schaeffer, and Brown (1986). Three categories captured children's *on-task behavior*: *On-Task Active Initiative* (e.g., a child contributed to a lesson on her own initiative, raised his hand, or volunteered to go to the board), *On-Task Working* (e.g., reading, working on a problem, continuing an activity, answering a question), and *On-Task Passive* (e.g., listening to the teacher or a classmate making an on-task contribution). Three categories captured off-task behavior: *Off-Task Initiative* (e.g., disrupting a classmate or interrupting the teacher with a nonacademic issue), *Off-Task Working* (e.g., building paper airplanes, participating in a classmate's active off-task behavior), and *Off-Task Passive Behavior* (e.g., daydreaming or listening to a classmate's off-task contribution). A category of *Other* was used for all other events.

Coding procedure and reliability. Codings were sequential in the natural occurrence of behavior, and they consisted of registering the respective behavior code, as well as the running time when a specific event occurred. Each day of observation was taped on one videotape. Twelve trained observers coded the tapes in a random sequence. To determine reliability, four 3-minute segments (2 within the first 15 minutes and 2 within the last 15 minutes) of each videotape were coded by two observers separately. Reliability codings proceeded without observer knowledge about which parts would be used for reliability checks and without the reliability observer present. Thus, reliability estimates are conservative when compared to real-time observations when two observers code simultaneously. Across the 29 days of observation (i.e., 29 videotapes), 200 3-min reliability segments were coded twice by two observers (a total of 8,000 observations). The average kappa was .71, with the lowest agreement of 57% (for Off-Task Initiative) and the highest agreement of 87% (for On-Task Working). Other percentages were as follows: On-Task Initiative, 70%; On-Task Passive, 74%; Off-Task Working, 76%, Off-Task Passive, 69% (observer agreement was 91% on *Other*). There were no indications of systematic observer differences, observer fatigue, or decay in observers' reliability across time.

Results

Analyses were conducted in four parts. First, multiple models depicting the structure of the assessments of engagement and disaffection were compared, using structural equation modeling with AMOS 4.0. Second, the correspondence between teacher and student reports was determined. Third, for a subset of children, the links between the assessments and *in vivo* observations in the classroom were

investigated. Fourth, the correlations between indicators of engagement and markers of a set of individual and social processes were analyzed.

Structure of Engagement and Disaffection

Testing unidimensionality of the four item sets. The first step was designed to identify a set of unidimensional and internally consistent items for each of the four components. Hence, the unidimensionality of each item set was assessed separately, using four confirmatory analyses of one-factor models. For student reports of engagement, using data from the spring time point, three of the four item sets showed, a good fit to a single-factor model: behavioral engagement (four items), $\chi^2 = 6.59$ (2, 1018), $p < .05$, CFI (comparative fit index) = 1.00, TLI (Tucker-Lewis index) = 1.00, RMSEA (root mean square error of approximation) = .05 (90% confidence intervals [CI] = .01, .09); behavioral disaffection (four items), $\chi^2 = 16.13$ (2, 1018), $p < .001$, CFI = 1.00, TLI = .99, RMSEA = .08 (90% CI = .05, .12), and emotional engagement (six items), $\chi^2 = 62.08$ (9, 1018), $p < .001$, CFI = 1.00, TLI = .99, RMSEA = .08 (90% CI = .06, .10). As expected, the item set for emotional disaffection—which contained items referring to boredom, worry, and general “badness”—was better fit by a hierarchical model in which the disaffected emotions were differentiated. The three latent factors (boredom, worry, and feeling bad) loaded to form a higher-order unidimensional latent factor (nine items), $\chi^2 = 94.25$ (24, 1018), $p < .001$, CFI = 1.00, TLI = .99, RMSEA = .05 (90% CI = .04, .07). The resulting score reliabilities were adequate (averaging .79). These results were replicated using data from the fall. For the teacher report assessments, items had to be deleted from each item set to create unidimensional subscales with two or three items. These saturated models (i.e., completely unrestricted models with zero degrees of freedom) all fit perfectly (e.g., CFI = 1.00, RMSEA = 0.00); hence, we do not report fit statistics for these four unidimensional subscales. The resulting score reliabilities calculated from the three-item scales (or inter-item correlation for emotional engagement) were high, averaging .86.

Correlations among the components of engagement. The observed correlations among the four components are presented separately for student reports and teacher reports in Table 1. Of greatest interest were the correlations between emotion and behavior within engagement and disaffection and between engagement and disaffection within emotion and behavior. As can be seen, all correlations were moderately high and in the expected directions—that is, emotion and behavior were positively correlated, whereas engagement and disaffection were negatively correlated. For student reports, emotion and behavior were more tightly connected (average $r = .61$) than were engagement and disaffection (average $r = -.52$), but all the correlations were well below |1.0|, which suggests a multidimensional structure

Table 1
Correlations Among Dimensions for Student Reports
and Teacher Reports of Engagement and Disaffection

Student-report	Behavioral Engagement	Behavioral Disaffection	Emotional Engagement	Emotional Disaffection
Behavioral Engagement	—	-.55 (-.75)	.60 (.79)	-.45 (-.64)
Behavioral Disaffection	-.42	—	-.52 (-.79)	.67 (.83)
Emotional Engagement	.53	-.41	—	-.60 (-.77)
Emotional Disaffection	-.34	.61	-.51	—
Teacher-report	Behavioral Engagement	Behavioral Disaffection	Emotional Engagement	Emotional Disaffection
Behavioral Engagement	—	-.82 (-.94)	.73 (.84)	-.60 (-.72)
Behavioral Disaffection	-.81	—	-.67 (-.79)	.65 (.81)
Emotional Engagement	.70	-.65	—	-.66 (-.78)
Emotional Disaffection	-.50	.55	-.59	—

Note: $N = 1,018$ students. Correlations for fall are below the diagonal; correlations for spring are above the diagonal. All correlations are statistically significant at the $p < .001$ level. Factor intercorrelations are in parentheses.

among the components. For teacher reports, however, emotion and behavior were more tightly connected for engagement ($r = .72$, averaged over fall and spring) than for disaffection ($r = .62$, averaged over fall and spring), and engagement and disaffection were more highly correlated for behavior ($r = -.82$, averaged over fall and spring) than for emotion ($r = -.63$, averaged over fall and spring). In fact, the negative correlations between behavioral engagement and behavioral disaffection were much higher for teachers than for students and thus suggest a potentially bipolar structure for teacher reports. None of the other correlations approached $|1.0|$, which suggests a multidimensional structure. As expected, factor intercorrelations taken from the structural models were higher (included in Table 1).

Comparing the fit of models that distinguished behavior from emotion. For each pair of components, we used confirmatory analyses to compare one- and two-factor models. Factors were allowed to correlate, and error correlations were fixed to zero. Of greatest interest were model comparisons. Because the one- and two-factor models were nested, we were able to calculate a chi-square difference statistic to directly test whether differences in fit were statistically significant. Given that the chi-square difference test is sensitive to sample size (i.e., more likely to reject the null hypothesis that two nested models are statistically equivalent), we also examined the CFI difference for each set of nested models. A difference of 0.01 or greater is an indication that two nested models are statistically different (Cheung & Rensvold, 2002).

First, we compared the one-factor model with a two-factor model that distinguished behavior from emotion, for engagement and for disaffection, separately (depicted in Figure 1 by Arrows 1 and 2, respectively). For both engagement and disaffection, we found that the models including separate factors for behavior and emotion fit the data significantly better: student reports for engagement, χ^2 difference (1) = 106.73, Δ CFI = 0.00, and disaffection, χ^2 difference (1) = 137.33, Δ CFI = 0.01; teacher reports for engagement, χ^2 difference (1) = 226.65, Δ CFI = 0.07, and disaffection, χ^2 difference (1) = 277.33, Δ CFI = 0.08. Although the chi-square difference test for student-reported engagement was statistically significant, the CFI difference suggests that perhaps the difference found was more a function of sample size. This pattern of results was replicated using data from the fall time point. In the two-factor models, all critical ratios associated with regression weights had absolute values higher than 2. For student reports, factor loadings for the two-factor model ranged from .55 to .84; squared multiple correlations (SMCs) ranged from .30 to .71. For teacher reports, factor loadings ranged from .72 to .92; SMCs ranged from .52 to .85.

Comparing the fit of models that distinguished engagement from disaffection.

Second, we compared a model of one bipolar factor (engaged versus disaffected) with a model that distinguished engagement from disaffection, for emotion and behavior, separately (as depicted in Figure 1 by Arrows 3 and 4, respectively). Again, factors were allowed to correlate, and error correlations were fixed to zero. For both behavior and emotion in spring, models that included separate factors for engagement and disaffection fit the data significantly better than one-factor models: student reports for behavior, χ^2 difference (1) = 183.38, Δ CFI = 0.01, and emotion, χ^2 difference (1) = 298.60, Δ CFI = 0.01; teacher reports for behavior, χ^2 difference (1) = 48.45, Δ CFI = 0.02, and emotion, χ^2 difference (1) = 328.03, Δ CFI = 0.13. This pattern of results was replicated using data from the fall. In the two-factor models, all critical ratios associated with regression weights had absolute values higher than 2. For student reports, factor loadings in the two-factor model ranged from .57 to .88; SMCs ranged from .33 to .77. For teacher reports, factor loadings ranged from .73 to .92; SMCs ranged from .53 to .85.

Comparing the fit of a four-factor model with two-factor alternative models.

The final set of structural analyses directly compared a four-factor model distinguishing among all the components with 2 two-factor alternatives: (a) behavior (engaged versus disaffected) and emotion (engaged versus disaffected), and (b) engagement (behavior and emotion) and disaffection (behavior and emotion). In these models, factors were allowed to correlate, and error correlations were fixed to zero. As can be seen in Table 2, the four-factor models fit the data significantly better in spring than did either of the two-factor models: student reports for behavior and emotion, χ^2 difference (1) = 530.90, Δ CFI = 0.01, and engagement and

Table 2
Comparison of the Two- and Four-Factor Models for Behavior and Emotion and for Engagement and Disaffection

Goodness of Fit Indices	Student Report Assessments			Teacher Report Assessments		
	Two-Factor Model		Four-Factor Model	Two-Factor Model		Four-Factor Model
	Behavioral and Emotional E/D	B/E Engagement and Disaffection		Behavioral and Emotional E/D	B/E Engagement and Disaffection	
χ^2	1,839.71	1,614.16	1,308.81	639.15	822.78	191.08
<i>df</i>	226	226	221	43	43	39
CFI	.97	.98	.98	.93	.90	.98
TLI	.97	.97	.98	.81	.75	.95
RMSEA (90% CI)	.08 (.08, .09)	.08 (.07, .08)	.07 (.07, .07)	.12 (.11, .13)	.13 (.13, .14)	.06 (.05, .07)

Note: $N = 1,018$ students. These data were from the spring measurement point; patterns were replicated using data from the fall measurement point. In all models, factors were allowed to correlate, and error correlations were fixed to zero. E/D = engagement/disaffection; B/E = behavioral/emotional; The Four-Factor Model = Behavioral Engagement, Emotional Engagement, Behavioral Disaffection, and Emotional Disaffection; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; CI = confidence intervals. All chi-square values significant at the $p < .001$ level.

disaffection, χ^2 difference (1) = 305.35, $\Delta\text{CFI} = 0.00$; teacher reports for behavior and emotion, χ^2 difference (1) = 448.07, $\Delta\text{CFI} = 0.05$, and engagement and disaffection, χ^2 difference (1) = 631.70, $\Delta\text{CFI} = 0.08$. Although the chi-square difference test for student-reported behavior and emotion was statistically significant, the CFI difference suggests that perhaps the difference was more a function of sample size. This pattern of results was replicated using fall data.

Descriptive statistics for the components from the final model. Table 3 presents the means, standard deviations, and reliability coefficients for scores from the four components of engagement, separately for fall and spring, as well as the correlations between fall and spring scores for each assessment. In terms of the student report scores, internal consistency reliabilities were generally adequate (.70 or above), with the exception of the four-item Behavioral Engagement subscale in the fall, although it improved by spring. The cross-time correlations revealed a moderately high level of stability over the school year (average $r = .62$). Comparison of mean levels from fall to spring revealed the typical pattern of losses in behavioral and emotional engagement across the school year.

In terms of teacher reports, score reliabilities were all satisfactory (above .80). Inter-individual stability over the school year was moderately high (average $r = .74$). Comparison of mean levels from fall to spring also revealed a loss in emotional engagement across the school year, although the loss in behavioral engagement seen in student reports was not found. As shown in the last rows of Table 3, despite the fact that the four components can be distinguished, scores can also be combined in different ways (e.g., by averaging emotion and behavior or by subtracting disaffection from engagement) to create conceptually interesting scores that were internally consistent and highly stable.

Multivariate analyses of mean-level differences in the components of engagement as a function of gender and grade revealed the expected statistically significant effects: Girls (compared to boys) and younger children (compared to older children) tended to be motivationally “better off,” showing consistently higher levels of behavioral and emotional engagement, as well as lower levels of behavioral and emotional disaffection at both time points. At the same time, comparisons of the cross-year stability correlations for the four components of engagement revealed that none differed as a function of gender or grade level.

Comparison of Student and Teacher Reports of Engagement in the Fall and Spring

Table 4 presents correlations between scores from the student and teacher reports of the four components of engagement in fall and spring, as well as the mean-level comparisons. As can be seen, teachers and students showed a modest

Table 3
Internal Consistency Reliabilities, Means, Standard Deviations,
and Cross-Year Stabilities of Student and Teacher Reports

Construct	Student-report Assessments					Teacher-report Assessments				
	Fall		Spring		Cross-year stability	Fall		Spring		Cross-year stability
	α (90% CI)	<i>M</i> <i>SD</i>	α (90% CI)	<i>M</i> <i>SD</i>		α (90% CI)	<i>M</i> <i>SD</i>	α (90% CI)	<i>M</i> <i>SD</i>	
Behavioral engagement	.61 (.58, .64)	3.39 .54	.72 (.70, .74)	3.34 .58	.53	.87 (.86, .88)	3.19 .70	.88 (.87, .89)	3.18 .71	.82
Behavioral disaffection	.71 (.69, .73)	1.84 .69	.78 (.76, .80)	1.85 .71	.64	.83 (.81, .84)	1.88 .77	.83 (.81, .84)	1.80 .75	.82
Emotional engagement	.76 (.74, .78)	3.12 .58	.82 (.81, .83)	3.03 .62	.64	.84 (.83, .85)	3.24 .68	.87 (.86, .88)	3.16 .73	.65
Emotional disaffection	.83 (.82, .84)	1.88 .61	.85 (.84, .86)	1.86 .60	.68	.81 (.79, .83)	1.53 .62	.85 (.84, .86)	1.55 .68	.67
Behavioral and emotional engagement	.79 (.77, .81)	3.25 .49	.86 (.84, .88)	3.18 .54	.65	.90 (.89, .91)	3.22 .64	.91 (.90, .92)	3.17 .67	.78

(continued)

Table 3 (continued)

Construct	Student-report Assessments					Teacher-report Assessments				
	Fall		Spring		Cross-year stability	Fall		Spring		Cross-year stability
	α (90% CI)	<i>M</i> <i>SD</i>	α (90% CI)	<i>M</i> <i>SD</i>		α (90% CI)	<i>M</i> <i>SD</i>	α (90% CI)	<i>M</i> <i>SD</i>	
Behavioral and emotional disaffection	.86 (.85, .87)	1.86 .58	.89 (.88, .90)	1.86 .60	.73	.85 (.84, .86)	1.70 .61	.89 (.88, .90)	1.67 .65	.81
Behavioral engagement versus disaffection	.73 (.71, .75)	3.27 .52	.82 (.80, .84)	3.24 .57	.70	.85 (.84, .86)	3.16 .70	.93 (.92, .94)	3.19 .70	.85
Emotional engagement versus disaffection	.86 (.85, .87)	3.12 .52	.89 (.88, .90)	3.08 .55	.70	.85 (.84, .86)	3.36 .58	.81 (.80, .82)	3.31 .64	.73
Engagement versus disaffection	.88 (.87, .89)	3.20 .47	.92 (.91, .93)	3.16 .51	.75	.93 (.92, .94)	3.26 .59	.94 (.93, .95)	3.25 .63	.83

Note: $N = 1,018$ students. All correlations (cross-year stabilities) are statistically significant at the $p < .001$ level. CI = confidence intervals.

Table 4
Correlations and Mean-Level Differences Between Student and Teacher Reports of the Components of Engagement in Fall and Spring

Construct	Fall		Spring	
	Correlations between Student and Teacher Reports	Mean-Level Differences between Student and Teacher Reports	Correlations between Student and Teacher Reports	Mean-Level Differences between Student and Teacher Reports
Behavioral engagement	.32	<i>MD</i> = .20, <i>d</i> = .27 ^a	.37	<i>MD</i> = .15, <i>d</i> = .21 ^a
Behavioral disaffection	.38	<i>MD</i> = -.01, <i>d</i> = .01	.35	<i>MD</i> = .05, <i>d</i> = .06
Emotional engagement	.24	<i>MD</i> = -.13, <i>d</i> = .17	.30	<i>MD</i> = -.13, <i>d</i> = .16
Emotional disaffection	.21	<i>MD</i> = .36, <i>d</i> = .46 ^a	.24	<i>MD</i> = .32, <i>d</i> = .40 ^a
Behavioral and emotional engagement	.34	<i>MD</i> = .04, <i>d</i> = .06	.38	<i>MD</i> = .01, <i>d</i> = .01
Behavioral and emotional disaffection	.35	<i>MD</i> = .17, <i>d</i> = .25 ^a	.36	<i>MD</i> = .18, <i>d</i> = .25 ^a
Behavioral engagement versus disaffection	.44	<i>MD</i> = .10, <i>d</i> = .18	.42	<i>MD</i> = .05, <i>d</i> = .07
Emotional engagement versus disaffection	.26	<i>MD</i> = -.24, <i>d</i> = .36 ^a	.33	<i>MD</i> = -.22, <i>d</i> = .32 ^a
Engagement versus disaffection	.41	<i>MD</i> = -.07, <i>d</i> = .12	.42	<i>MD</i> = -.09, <i>d</i> = .14

Note: *N* = 1,018 students. *MD* = mean difference. *d* = Cohen’s *d* calculated using pooled standard deviation that accounts for the correlation between student and teacher reports. Positive mean differences indicate higher student report scores; negative mean differences indicate higher teacher report scores. All correlations are statistically significant at the *p* < .01 level.

a. An effect size that is small to medium (between .20 and .50).

degree of convergence in their ratings of engagement and disaffection (average *r* = .30), especially for the behavioral indicators, which were more directly observable (average *r* = .36). As would be expected, inter-reporter correlations were even higher for the aggregated measures—for example, the correlations between teacher and student ratings of behavioral engagement versus disaffection averaged .43.

Cross-reporter comparison of mean levels of scores revealed that students felt that they were more behaviorally engaged (i.e., that they were trying harder and exerting more effort) than teachers observed them to be. Students and teachers did not differ in their ratings of behavioral disaffection, perhaps because teachers were providing direct feedback to students about their behaviors. Teachers and students did differ on their ratings of student emotions in the classroom: Students indicated that they were more emotionally disaffected than teachers perceived them to be.

These differences may reflect the fact that emotions are not as easily observed by teachers or that students have learned to mask the expression of their emotions. In the case of emotional disaffection, differences may also be due to the slightly different mix of emotions included in the item sets for students as compared to those for teachers. Although only a few studies include cross-reporter comparisons, these findings are consistent with other comparisons that have been reported (Skinner & Belmont, 1993).

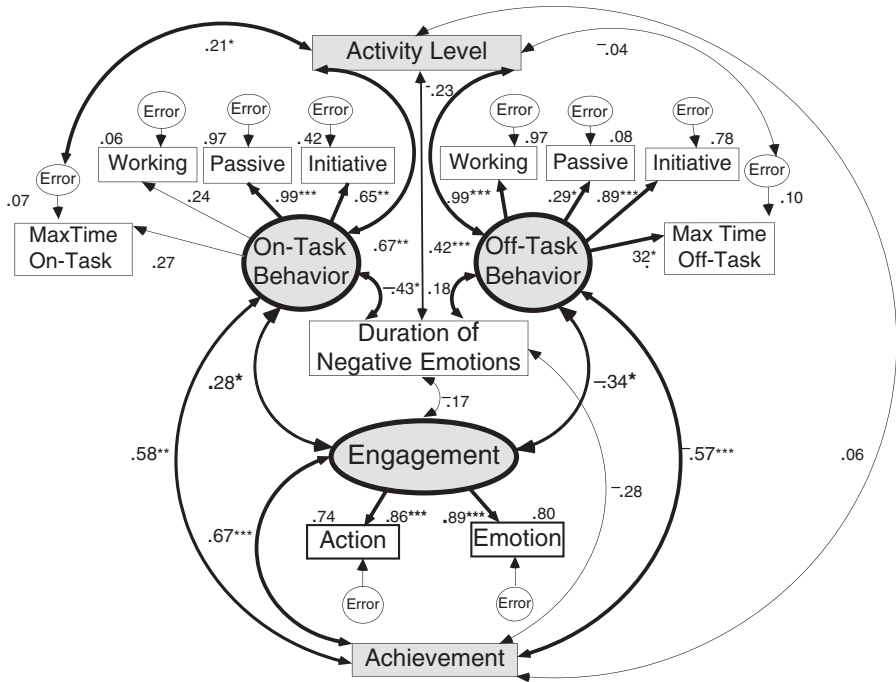
Observations of Engagement and Disaffection in the Classroom

The third goal was to examine whether scores from student and teacher report assessments of engagement were statistically significantly correlated with *in vivo* observations of students' engagement in the classroom. In total, 46,756 observations were coded during the 95.5 hr of observations (i.e., averaging about 8.2 codes per minute). Forty percent of all the observations occurred in Mathematics, 40% in Language lessons. Rates per minute were computed, reflecting the length of time that children were observed to engage in the behaviors of each observation category each minute. Most of the time, children were observed to be on-task, and on-task behaviors were typically of a longer duration than off-task behaviors.

Relations between behavior frequencies and self-reported and teacher-reported engagement. Correlations between children's observed behavior (rates and durations per minute) and their engagement in the classroom (self- and teacher-reports) were modest; strongest relations (ranging from .35 to .40) were found for teacher ratings; for student reports, ratings of disaffection correlated with only classroom behaviors, but even these relations were comparably small. The correlational pattern between teacher-rated engagement and observed behaviors was not affected when children's gender was controlled.

Figure 2 contains the model of the relations between teacher ratings of engagement (combining all four components) and the behavioral observations, organized into On-task behaviors (combining on-task initiative, working, passive, and the maximum time spent off-task) and Off-task behaviors (combining Off-task initiative, working, passive, and the maximum time spent off-task). In this model, total activity level, duration of negative emotions, and achievement were also included because it became apparent that some children were just more active and/or emotionally reactive than others. The highly active children showed more behaviors of both types (On-task and Off-task), and the more emotionally reactive children showed more emotions of both types (engaged and disaffected). The model showed a satisfactory fit with the data: $\chi^2(df = 56) = 64.66$, CFI = .943, CMIN/ $df = 1.22$ (denoting the minimum chi-square discrepancy per degree of freedom), RMSEA = .07. As can be seen in Figure 2, children whom teachers rated as more behaviorally and emotionally engaged (versus disaffected) also showed overall

Figure 2
A Model of the Relations Between Teacher Ratings of Student Engagement and *In Vivo* Behavioral Observations of Student On-Task and Off-Task Behavior in the Classroom



* $p < .05$. ** $p < .01$. *** $p < .001$.

higher amounts and durations of On-task behavior (standardized coefficient = .28) and lower amounts and durations of Off-task behavior (standardized coefficient = -.34). Models depicting the connection between student ratings of engagement and their observed behavior in the classroom did not show a good fit with the data.

Correlations With Potential Personal and Social Facilitators of Motivation

The fourth goal of this study was to examine whether scores from student and teacher reports of engagement were correlated with a set of variables posited by motivational theories to facilitate engagement. These included markers of perceived control, autonomy, relatedness, optimism, pessimism, goal orientations, reactions

to academic challenges and difficulties, and interactions with parents and teachers. The means, standard deviations, internal consistencies, and cross-year stabilities for all these student-report variables (presented in Table 5) suggest a generally well-functioning group of third through sixth graders whose inter-individual rankings remained relatively stable over the school year (average cross-year correlation = .57) and whose mean levels were consistent with other research on these self-perceptions.

Correlations between engagement and its potential facilitators, also in Table 5, show the predicted pattern in both fall and spring, in that engagement showed robust positive correlations with personal and social indicators and negative correlations with factors hypothesized to undermine motivation. Of course, student ratings of engagement showed a pattern of stronger correlations, given that the potential facilitators were also reported by students. Consistent with theoretical expectations, students who were more engaged also showed consistently higher confidence in their capacities (including effort, ability, powerful others, and luck), more intrinsic and identified regulatory styles, higher relatedness to all social partners (but, especially, teachers and classmates), higher learning goals, optimism, and mastery reactions to challenges, as well as more supportive relationships with parents and teachers. In contrast, students who were more disaffected evinced more reliance on uncontrollable strategies (including powerful others, luck, and unknown causes), a more external self-regulatory style, higher pessimism, avoidance, and negative emotional reactions to challenge, and they experienced interactions with teachers that were more hostile, chaotic, and controlling. As expected, this pattern of findings was replicated across reporters at both time points.

Only three variables did not show the expected pattern, and theoretical explanations can be found for these results. First, strategy beliefs for effort did not correlate with student ratings of engagement (and only marginally correlated with teacher ratings), suggesting that even though students agreed that effort is an effective strategy for school success, this belief alone is not sufficient to support constructive classroom engagement (for similar findings, see Skinner et al., 1988). Second, strategy beliefs for ability were not correlated with teacher ratings of engagement, although they did show a low negative correlation with student reports of engagement. In general, beliefs in ability as a strategy—because they imply that success requires “talent”—are thought to undermine engagement, especially in the face of challenge (Dweck, 1999b; Skinner et al., 1998). And, third, an introjected self-regulatory style was marginally correlated with student ratings (positively) and with teacher ratings (negatively) but at only one time point. This style of self-regulation (in which students’ reasons for participating in school work reflect guilt or internal pressure) seems to be a double-edged sword in that the pressure spurs on behavior but at the expense of enjoyment and enthusiasm (e.g., Patrick et al., 1993).

Table 5
Means, Standard Deviations, and Cross-Year Stabilities of Potential Facilitators of Motivation
and Their Correlations with Student and Teacher Reports of Engagement at Two Time Points

Potential Facilitator	Fall		Spring		α (90% CI)	Cross-year stability	Student Reports of Engagement		Teacher Reports of Engagement	
	M	SD	M	SD			Fall	Spring	Fall	Spring
<i>Academic Perceived Control</i>										
Perceived control beliefs	3.42	.50	3.43	0.52	.71 (.69, .73)	.55	.58	.62	.40	.44
<i>Strategy Beliefs</i>										
Effort strategy beliefs	3.09	.58	3.08	0.57	.65 (.62, .68)	.45	-.01, ns	.05, ns	.04, ns	.14
Ability strategy beliefs	2.54	.71	2.51	0.69	.68 (.65, .71)	.50	-.29	-.29	-.05, ns	-.04, ns
Powerful others strategy	1.75	.66	1.73	0.66	.74 (.72, .76)	.58	-.48	-.55	-.27	-.37
Luck strategy beliefs	1.87	.69	1.80	0.68	.75 (.73, .77)	.59	-.42	-.45	-.25	-.30
Unknown strategy beliefs	1.91	.66	1.84	0.67	.74 (.72, .76)	.54	-.50	-.60	-.31	-.38
<i>Capacity Beliefs</i>										
Effort capacity beliefs	3.36	.53	3.30	0.57	.72 (.70, .74)	.59	.64	.71	.38	.47
Ability capacity beliefs	3.29	.58	3.27	0.59	.76 (.74, .78)	.65	.66	.66	.42	.42
Powerful others capacity	3.25	.55	3.20	.60	.70 (.68, .72)	.53	.52	.57	.33	.48
Luck capacity beliefs	3.08	.59	3.06	.60	.68 (.65, .70)	.57	.58	.62	.38	.59
<i>Autonomy Orientation</i>										
External self-regulatory style	2.80	.79	2.76	.74	.79 (.77, .81)	.82	-.26	-.28	-.13	-.12
Introjected self-regulatory style	2.71	.77	2.71	.77	.77 (.75, .79)	.53	-.09	-.01, ns	.03, ns	.07*
Identified self-regulatory style	3.29	.64	3.25	.61	.82 (.80, .83)	.60	.68	.67	.24	.27
Intrinsic self-regulatory style	2.67	.94	2.50	.95	.89 (.88, .90)	.66	.47	.47	.13	.13
<i>Sense of Relatedness</i>										
Relatedness to mother	3.49	.61	3.52	.62	.80 (.78, .82)	.46	.40	.46	.22	.32
Relatedness to father	3.42	.66	3.50	.63	.80 (.78, .82)	.46	.38	.42	.22	.34
Relatedness to teacher	3.05	.75	3.06	.74	.81 (.79, .81)	.53	.53	.60	.28	.34
Relatedness to friends	3.45	.60	3.48	.60	.76 (.74, .78)	.37	.35	.38	.17	.24
Relatedness to classmates	3.21	.74	3.23	.73	.84 (.83, .85)	.50	.48	.48	.17	.29

(continued)

Table 5 (continued)

Potential Facilitator	Fall		Spring		α (90% CI)	Cross-year stability	Student Reports of Engagement		Teacher Reports of Engagement	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			Fall	Spring	Fall	Spring
<i>Optimism and Pessimism</i>										
Optimism	3.08	.58	3.04	.57	.58 (.54, .61)	.45	.33	.41	.17	.19
Pessimism	2.18	.67	2.14	.65	.73 (.71, .75)	.56	-.54	-.53	-.27	-.32
<i>Goal Orientations</i>										
Learning goals	3.47	.53	3.42	.56	.77 (.75, .79)	.64	.61	.66	.27	.31
Performance approach goals	3.59	.52	3.61	.50	.76 (.74, .78)	.47	.40	.47	.17	.23
<i>Reactions to Challenge</i>										
Mastery reactions	3.47	.55	3.35	.57	.73 (.70, .75)	.58	.57	.60	.26	.34
Avoidance reactions	1.61	.62	1.66	.61	.78 (.76, .80)	.65	-.69	-.75	-.36	-.40
Negative emotional reaction	2.45	.67	2.34	.65	.89 (.88, .90)	.60	-.38	-.37	-.12	-.08*
<i>Social Context</i>										
Parents: Warmth	3.32	.59	3.28	.62	.81 (.79, .82)	.65	.57	.59	.33	.35
Structure	3.21	.57	3.20	.55	.52 (.48, .56)	.43	.33	.43	.17	.26
Autonomy support	3.13	.53	3.20	.51	.60 (.57, .63)	.54	.48	.55	.26	.34
Teachers: Warmth	3.00	.59	2.89	.64	.86 (.85, .87)	.58	.53	.55	.24	.26
Structure	3.12	.47	3.06	.49	.83 (.82, .84)	.60	.50	.55	.22	.28
Autonomy support	2.81	.55	2.79	.56	.76 (.74, .78)	.57	.40	.47	.20	.20
Teachers: Hostility/neglect	2.00	.62	2.03	.65	.85 (.83, .86)	.62	-.63	-.65	-.31	-.35
Chaos	2.05	.60	2.02	.60	.90 (.89, .91)	.70	-.67	-.68	-.34	-.36
Coercion	2.10	.59	2.07	.64	.90 (.89, .91)	.66	-.66	-.70	-.33	-.34

Note: $N = 1,018$ students. All potential facilitators were measured using student reports. All correlations are significant at the $p < .01$ level, unless noted. Cronbach's alpha coefficients reported from the spring time point. CI = confidence interval.

* $p < .05$. *ns* = not statistically significant

Discussion

A study was conducted to analyze the structure, psychometric properties, validity, and correlates of scores from two assessments of students' behavioral and emotional participation in the classroom, referred to as *engagement* and *disaffection*. In general, multidimensional structures were found for scores from student and teacher reports, revealing behavioral and emotional components that are positively correlated, as well as engaged and disaffected components of each, which are negatively correlated with each other. Moreover, for student reports, indicators of disaffected emotions, although highly intercorrelated, could nevertheless be further distinguished according to whether students were feeling anxious, bored, or frustrated/bad.

The psychometric properties of scores for individual components, tapped by only three or four items each, were satisfactory for the most part; for a few components, additional supplementary items were suggested (see Appendices A and B). Correlations across the school year revealed that scores were inter-individually stable, although they tended to worsen in mean level. Comparison of scores from student and teacher reports showed the predicted pattern: Teachers and students showed modest agreement, which was higher for behavior than for emotion. Students reported that they were more behaviorally engaged than teachers judged them to be, and teachers underestimated student emotional disaffection relative to students' actual feelings. Despite its multidimensional structure, however, components were systematically interrelated in ways that allowed items to be combined into aggregate scores (with disaffection items reverse-coded) that showed satisfactory internal consistencies, high cross-time stabilities, and good correspondence between reporters. Scores from teacher reports, but not from student reports, were correlated with *in vivo* observations of engagement in the classroom, likely because teachers are also observers of student engagement. For both reporters, indicators of engagement and disaffection were consistently linked in theoretically expected ways with individual and interpersonal factors hypothesized to shape motivation.

Taken together, findings indicate that scores from these two assessments of engagement and disaffection are satisfactory markers of the quality of children's participation in academic activities in the classroom. As such, they should be comparable to other teacher or child report assessments of student participation (e.g., Berndt & Miller, 1990; Finn et al., 1995) and other measures of student engagement that focus on involvement in school tasks (Murdock, 1999; Sinclair, Christenson, Lehr, & Anderson, 2003), academic effort (e.g., O'Donnell, Hawkins, & Abbott, 1995), or effort and interest in the classroom (e.g., Wentzel, 1998). Research has shown that these features of classroom participation are correlated as expected with other indices of day-to-day academic involvement, such as attendance/absenteeism, completion of homework, and preparedness for class (e.g., Finn, 1989; Johnson,

Crosnoe, & Elder, 2001). At the same time, the multidimensional structure of scores from the current assessments indicates that no one component is a proxy for the entire construct; comprehensive assessments need to include items that tap all four components. Moreover, the extent to which components can be distinguished suggests that scores can be created to differentiate children with specific profiles—for example, children who are behaviorally engaged but emotionally disaffected (Patrick et al., 1993) or children who are anxiously withdrawn (Finn et al., 1995).

Limitations of the Assessments of Engagement and Disaffection

The current assessments are limited, not only within the footprint of the item sets included in current versions, but also in relation to other conceptualizations of engagement. In terms of the current item sets, we should note that more multidimensionality may be present than is depicted by the four components of engagement and disaffection. For example, within children's reports of emotional disaffection, we found evidence that multiple negative emotions can be differentiated. Moreover, in the teacher reports, we needed to delete several items from behavioral and emotional engagement in order to identify unidimensional item sets. This indicates that additional dimensions might be present, if we had had sufficient items to detect them. These findings suggest that engagement and disaffection may eventually be best represented by a hierarchical structure, with multiple dimensions within each of the four components identified in this study. Conceptually driven generation of items, combined with the kinds of structural comparisons used in the present study, may lead to a more complete picture of the structure of engagement and disaffection.

Other conceptualizations of engagement. We should also note that the current assessments do not contain all the components that are included as indicators of classroom participation and academic involvement. Some researchers add student commitment or “beyond the call,” which refer to preference for challenge or willingness to take on extra work (e.g., Gottfried, 1985; Harter, 1981). To disaffection, some assessments add student oppositional, disruptive, rebellious, or defiant behavior (e.g., Finn et al., 1995; Roeser, Strobel, & Quihuis, 2002). To both components, it is possible to add the assessment of “re-engagement,” or coping with challenges and setbacks (Skinner & Wellborn, 1997). Future research can examine how each of these potential features is structurally related to the four components tapped in this study.

Other motivational perspectives. The current assessment of engagement and disaffection, although representing a core feature of most major theories of motivation, does not include all the features and shadings considered by every framework. For example, attribution theories include a wider variety of emotions, such as pride

and shame (Weiner, 1985); self-determination theory emphasizes experiences of psychological freedom or pressure (Deci & Ryan, 1985); learned helplessness includes cognitive and self-esteem deficits (Peterson et al., 1993); volition perspectives focus on cognitive and energetic depletion (Kuhl, 1984); theories of achievement goals point out their effects on hope, pride, shame, and hopelessness (Pekrun, Elliot, & Maier, 2006). In fact, a fuller account of motivated action includes not only ongoing action but also the direction of action, as manifested in choice, selection, and preference (Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006) and the regulation of action, sometimes called *self-regulated learning* (Schunk & Zimmerman, 1994; Zimmerman, 2000) or *academic coping* (Skinner & Wellborn, 1997).

Conclusion

In sum, we bring to discussions of children's engagement in school a conceptualization and two assessments of students' behavioral and emotional involvement in academic activities in the classroom, which we refer to as *engagement* and *disaffection*. The four components can be distinguished statistically, but practically it may make more sense to combine them, unless there exists a clear theoretical rationale for contrasting their individual effects or examining specific combinations. These assessments capture core constructs key to motivational theories in the field today, and they may be used as a foundation to create a more complete account of motivated action. Perhaps future work on the conceptualization and assessment of motivated participation in academic activities in the classroom can build on the conceptual arguments and empirical strategies presented in this article.

Appendix A: Engagement Versus Disaffection with Learning: Student Report

Behavioral Engagement

1. I try hard to do well in school.
2. In class, I work as hard as I can.
3. When I'm in class, I participate in class discussions.
4. I pay attention in class.
5. When I'm in class, I listen very carefully.

Emotional Engagement

1. When I'm in class, I feel good.
 2. When we work on something in class, I feel interested.
-

(continued)

Appendix A: (Continued)

3. Class is fun.
4. I enjoy learning new things in class.
5. When we work on something in class, I get involved.

Behavioral Disaffection

1. When I'm in class, I just act like I'm working. (–)
2. I don't try very hard at school. (–)
3. In class, I do just enough to get by. (–)
4. When I'm in class, I think about other things. (–)
5. When I'm in class, my mind wanders. (–)

Emotional Disaffection

1. a. When we work on something in class, I feel bored. (–)
b. When I'm doing work in class, I feel bored. (–)
c. When my teacher first explains new material, I feel bored. (–)
2. a. When I'm in class, I feel worried. (–)
b. When we start something new in class, I feel nervous. (–)
c. When I get stuck on a problem, I feel worried. (–)
3. When we work on something in class, I feel discouraged. (–)
4. Class is not all that fun for me. (–)
5. a. When I'm in class, I feel bad. (–)
b. When I'm working on my classwork, I feel mad. (–)
c. When I get stuck on a problem, it really bothers me. (–)
d. When I can't answer a question, I feel frustrated. (–)

Note: Adapted from Wellborn (1991). The items added to the Emotional Disaffection subscale can be used to tap the more differentiated disaffected emotions.

Appendix B: Engagement Versus Disaffection with Learning: Teacher Report

Behavioral Engagement

1. In my class, this student works as hard as he/she can.
 2. When working on classwork in my class, this student appears involved.
 3. When I explain new material, this student listens carefully.
 4. In my class, this student does more than required.
 5. When this student doesn't do well, he/she works harder.
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(continued)

Appendix B: (Continued)

Emotional Engagement

1. In my class, this student is enthusiastic.
2. In class, this student appears happy.
3. When we start something new in class, this student is interested.
4. When working on classwork, this student seems to enjoy it.
5. For this student, learning seems to be fun.

Behavioral Disaffection

1. When we start something new in class, this student thinks about other things. (–)
2. In my class, this student comes unprepared. (–)
3. When faced with a difficult assignment, this student doesn't even try. (–)
4. In my class, this student does just enough to get by. (–)
5. When we start something new in class, this student doesn't pay attention. (–)

Emotional Disaffection

1. a. When we work on something in class, this student appears to be bored. (–)
b. When doing work in class, this student looks bored. (–)
 2. a. When working on classwork, this student seems worried. (–)
b. In my class, this student is anxious. (–)
 3. a. In class, this student seems unhappy. (–)
b. In my class, this student appears to be depressed. (–)
 4. a. In my class, this student is angry. (–)
b. When working on classwork, this student appears frustrated. (–)
 5. a. When I explain new material, this student doesn't seem to care. (–)
b. When working on classwork in my class, this student seems uninterested. (–)
-

Note: Adapted from Wellborn (1991). The items added to the Emotional Disaffection subscale can be used to tap the more differentiated disaffected emotions.

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