Expeditionary Learning Schools:
Theory of Action and Literature Review of Motivation, Character, and Engagement

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Background

Expeditionary Learning Schools (ELS) opens and transforms K-12 schools. Through learning expeditions[1] and an emphasis on a healthy school culture, ELS aims to develop students who are not only high-achieving but also highly motivated to do challenging activities and deeply engaged in work that matters. In addition, the creation and posting of "crew courtesies"[2] and the crew meetings that support and reinforce them make evident the importance of character expectations such as cooperation and good citizenship for every ELS student.

Recognizing that the student outcomes they are trying to achieve go beyond state test scores, ELS received funding from the Nellie Mae Foundation to create a theory of action, write a review of relevant literature, and propose a draft set of measures addressing these other student outcomes in February 2009. Later in 2009, ELS contacted Mid-continent Research for Education and Learning (McREL) to help to narrow the theory of action to a measurable set of crucial student outcomes focusing on motivation, engagement, and character. In April 2010 McREL project team members met with ELS representatives to begin work on the project by discussing the ELS approach and the student outcomes it was intended to influence. Following that meeting, in May 2010 the entire McREL project team visited Odyssey School in Denver to observe a high-performing ELS school in action.

From these Expeditionary Learning Schools sources of information, McREL proposed an updated model of student outcomes. It focuses on three primary areas: motivation, character, and engagement.

Motivation

In EL schools, motivation is a key concept. Motivation is generally thought to be that which gives behavior its energy and direction (Reeve, 2001). In EL schools there are several sources of student motivation. With learning expeditions, students are expected to work hard to master a challenging topic that is so interesting and engaging that students have a desire to learn more. They then share their learning by creating very high-quality products—products that are much more impressive than they initially thought they could produce—for a purpose beyond the classroom. This sense of accomplishment then motivates further learning, and gives students the confidence that they can master future expeditions.

Motivation has many aspects that are represented in the psychological literature. For EL schools, motivation constructs that appear to be particularly relevant are achievement goals (mastery versus performance goals), intrinsic/extrinsic motivation, preference for challenge, and efficacy.

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[1] Engaging, long-term interdisciplinary projects, designed to achieve academic standards, whose results are shared with authentic audiences.
[2] Observed at the Odyssey School, Denver, Colorado.

Achievement goals: These consist of both mastery and performance goals. Mastery goals are task-focused. Students who have mastery goals are interested in learning and mastering a task, even if it is difficult. Students who have performance goals are more focused on others' perceptions of their competence than on the learning task, and either seek to demonstrate their competence to others or avoiding having to demonstrate their competence.

Intrinsic (versus extrinsic) motivation: Intrinsic motivation is associated with mastery goals; it refers to rewards that derive from the interest and enjoyment of the task itself. Extrinsic motivation is more associated with performance goals and refers to reward that are external to the task, such as tokens, grades, or praise from others.

Self/collective efficacy: Self-efficacy (also known as perceived competence or competence belief) is the confidence that one can accomplish a given task. It is thought to be a link between motivation/goal orientation and actual engagement, as one is more likely to engage in a task if one believes it is possible. There is also a more recent construct of collective efficacy—the belief that one is part of a group that has a collective capacity to accomplish a given task. Despite its apparent relevance to the ELS approach, collective efficacy research in education has primarily focused on teachers. The literature on its application to K-12 U.S. students is still in its infancy.

Character

Through discussions with ELS staff and school observations, it became clear that certain aspects of student character were crucial to the ELS approach. ELS intends to support the development of students who work cooperatively with others, uphold responsibilities, respect others and their feelings, feel a strong sense of belonging in school, and are engaged in working for the good of community and society. While these values were emphasized in the meeting between ELS and McREL, the McREL team was especially struck by the extent to which these values in action permeated every aspect of the program at Odyssey school. Although traditional schools may display posters or maintain class or school rules advocating these character traits, at an ELS school these are also discussed in an intentional way that ensures they are salient to every student, teacher, staff member, or visitor. It became quickly clear that these aspects of character were essential to how a high-performing ELS school operates.

Given the diffuse nature of the research literature related to character, researchers chose to limit this review to aspects of character deemed particularly relevant to the ELS program model. McREL ultimately chose to focus on relational character, which focuses on skills and behaviors that are needed for interacting effectively and responsibly with others. These behaviors include empathic responding, respect for others, a sense of fairness, honesty, and social competence (T. Lickona & Davidson, 2005). In the process of narrowing the scope of this review to those constructs most relevant to ELS, McREL chose to place special emphasis on two behaviors: *social responsibility* and *cooperation.* In keeping with the ELS program model, social responsibility implies the tendency of students to hold themselves accountable for the effects that

actions might have on other individuals and/or society. Social responsibility may encompass related constructs, such as respect for learning and the classroom environment. Likewise, *cooperation* indicates a student's ability to work interdependently with others toward a common goal that will benefit all involved.

This report addresses how social responsibility and cooperation relate to student engagement and achievement, the classroom environment, and student age.

Engagement

Students who expend effort in learning focus and concentrate on deeply processing the information. Students who demonstrate persistence remain actively involved in the learning task, even if it becomes difficult. Effort and persistence, along with other qualities, have been referred to in the character literature as components of *performance character* (T. Lickona & Davidson, 2005). However, a rich literature on effort and persistence, including research evaluating measurements of these constructs, is found in the social science literature on motivation. In the model, engagement is presumed to mediate the influence of character/prosocial orientation and motivation on student success outcomes.

In the model, student engagement is also linked to a broader identification with external institutions – namely, school and society. The model assumes a reciprocal relationship between student connection to their external environment and individual measures such as effort and persistence (i.e., engaged students are more likely to feel connected to their learning environment and to the broader community, which in turn stimulates effort and persistence). Within the context of this literature review, identification with school is defined as the tendency of students to feel a sense of belonging towards their school, to value the institution of learning, and to feel responsibility for school-related outcomes. Civic engagement describes the propensity of students to exercise the rights and responsibilities of citizenship and to promote the common good of society.

Model of Theory of Action

The proposed updated model of the theory of action is in Figure 1. It shows the components of character and motivation that we are focusing on, along with their relationship to engagement. These lead to student success outcomes. In this review, we are focusing on the constructs inside the dotted line.

Methods

The researchers began with seminal works in each area, when appropriate, then supplemented those with articles from the research literature found by searching relevant databases. The databases searched and keywords used are described in each individual section. In general, the literature review focused on studies using K-12 students.

Figure 1. Model of ELS Theory of Action

STUDENT SUCCESS OUTCOMES

Achievement
College Readiness

ENGAGEMENT IN LEARNING

Effort and Persistence
Identification with School
Civic Engagement

CHARACTER

Responsibility
Cooperation

MOTIVATION

Achievement Goals
Intrinsic Motivation
Self and Collective Efficacy
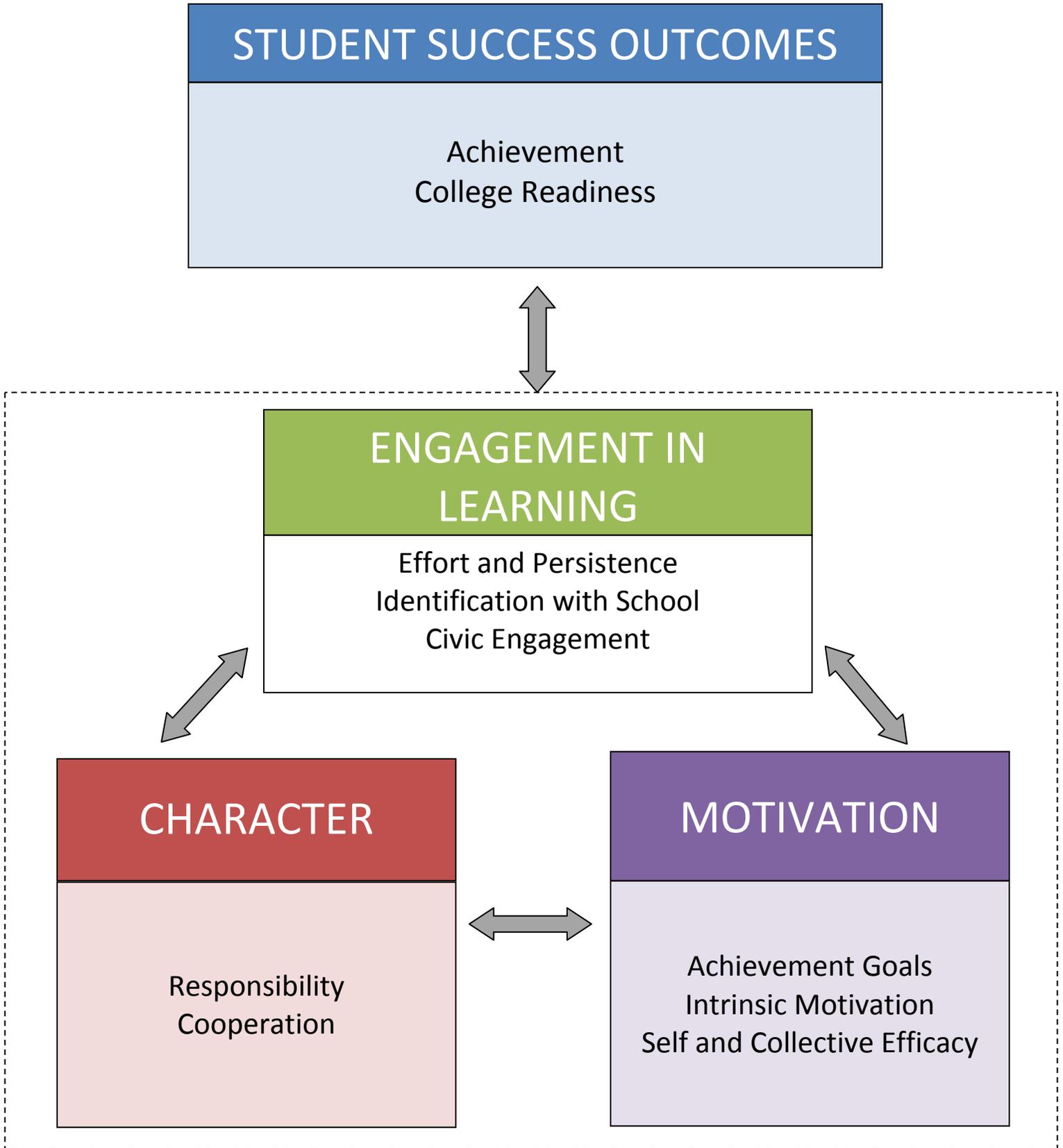
This literature is focused rather than exhaustive. We focused on defining the constructs and their components as precisely as possible, including their relationships to other constructs. Then we addressed, to the extent feasible given the extant literature, links among the constructs and the classroom environment, student age, and engagement/achievement. The links to the classroom environment are important because all of these constructs are considered—at least to some degree—malleable and responsive to environmental influences. ELS intends to provide a classroom environment that affects these constructs in specific ways (for example, by fostering intrinsic motivation through learning expeditions). The relationship between the constructs and age is important both in understanding how the students' understanding of the construct changes as students develop, and what developmental patterns have been observed by others over the grade span (such as the frequently observed inverse relationship between age and intrinsic motivation). The links between the constructs and engagement/achievement serve to describe the support derived from the literature for the hypothesized link between motivation, character, and engagement depicted in the figure.

Motivation

Motivation is the impetus behind what we actually do—the interior mental state that leads to action. It influences what we choose to do, and how well and for how long. Educators have long been interested in fostering and measuring aspects of student motivation because of the link between motivation and the learning activities that students actually do. In this review, we address achievement goals, intrinsic and extrinsic motivational orientations, preference for challenge, and efficacy beliefs.

Achievement Goals

In order to find articles about achievement goals, the ERIC and PsycINFO databases were searched with the keyword *achievement goals*. Relevant references from the articles found were also retrieved and reviewed.

Description

Students may have many kinds of goals. They may want to get an A on a science test (a very specific goal applying to one task), or they may want to achieve happiness in life (a very general goal). *Achievement goals* exist between these very specific task-related goals and very general life goals; they are intended to refer specifically to reasons that students do an academic task (Pintrich, 2000a) and thus to explain motivation for achievement. These goals are cognitive representations of what students are trying to accomplish and their purposes or reasons for doing the learning task. Therefore, it is assumed that students are aware of them and can describe or identify them; they are not unconscious needs or motives (Pintrich, 2000a).

Mastery Goals and Performance Goals

In Dweck's study of adaptive and maladaptive motivational patterns (1986), she described achievement goals of two types, *learning (mastery)* and *performance* goals. Individuals with

mastery goals "seek to increase their competence, to understand or master something new," while those with performance goals "seek to gain favorable judgments of their competence" (p.1040). According to Dweck (1986) and others (Cury, Elliot, Da Fonseca, & Moller, 2006), one's theory of intelligence is the factor underlying goal orientation. Those who believe that intelligence is fixed (entity theory of intelligence) tend to adopt performance goals because they see achievement situations as tests of this fixed trait, so they want to get positive ratings of their competence, or at least avoid negative ones. Those who believe that intelligence is malleable and that competence can improve with practice tend to adopt mastery goals.

Relationship to Engagement and Achievement

For those who are primarily motivated by performance goals, in situations in which their perceived competence is high they prefer a challenging task and persist in their efforts because they believe that accomplishing the task will result in improvements in others' impressions of their ability. However, when their perceived competence for a task is low, they avoid true challenge. When possible, they will either choose easy tasks they think they can complete, or very difficult ones that few people could complete, so that failure does not seem to indicate that their ability is low. When faced with obstacles, they do not persist in the task, because outright failure would imply that they have low ability.

People who are primarily motivated by mastery goals, however, believe that intelligence is malleable and strive to develop competence. According to the theory, people with mastery goals tend to choose challenging tasks, even in situations where their self-perception of ability is low, because they are intrinsically interested in the task and want to master it, rather than being concerned with others' perceptions of their ability. They engage in the task (Miller, Greene, Montalvo, Ravindran, & Nichols, 1996), and they persist when faced with obstacles, expending effort and trying new strategies. When they succeed, or even when they fail, they report satisfaction because of their effort (Dweck, 1986). Students with mastery goals tend to report enjoying the school experience (Witkow & Fuligni, 2007).

In their work, Elliot and his colleagues have further divided performance goals into performance-approach and performance-avoidance goals, and then mastery goals into mastery-approach and mastery-avoidance goals, to create a 2x2 achievement goal framework (Elliot & McGregor, 2001). Those with performance-approach goals wish to do better than others, while those with performance-avoidance strive to avoid doing worse than others (Elliot & Church, 1997; Elliot & Thrash, 2001). Performance-approach goal regulation can include either a need for achievement, in which people eagerly approach the task, or a fear of failure, in which people approach the task and work very hard (overstrive) because they do not want to fail (Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002). Performance-avoidant people may try to avoid the achievement situation, or as Dweck (1986) also described, choose very easy or very difficult tasks. While people with mastery-approach goals strive to learn all they can and approach the learning task positively, people with mastery-avoidance goals seek to avoid learning less than they possibly can—they are worried that they will not make the most of their learning opportunities. Mastery-

avoidance then tends to be associated with fear of failure and anxiety (Elliot & McGregor, 2001; Elliot & Murayama, 2008). The mastery-avoidance concept is the least accepted of the performance goals, and even the developers of the 2x2 framework sometimes use a trichotomous framework in which performance-approach and –avoidance goals are studied along with mastery goals, which in this case are mastery-approach goals (Elliot, Shell, Henry, & Maier, 2005).

Research has addressed the possibility that people may not be dominated by either learning or performance goals, but may endorse multiple goals, and that a combination of learning and performance-approach goals is beneficial to achievement. Most of this research was conducted with college students. Pintrich (2000b) found that undergraduate students with high mastery (learning) and low performance goals and those with high mastery and high performance goals performed equally well on most outcomes, and that on some outcomes the high-mastery/high-performance students performed better. Harackiewicz, Barron, Tauer, Carter, and Elliot (2000) studied college students over three semesters, and found that performance-approach goals predicted short- and long-term academic performance and that mastery goals predicted short-term interest in the course and enrollment in subsequent related courses. Therefore they suggested that optimal goal adoption consists of both performance-approach and mastery goals, because both grade performance and continued interest are important to success in college. When the researchers followed some of these students to graduation (Harackiewicz, Barron, Tauer, & Elliot, 2002), they found the same predictive pattern, although the effects of performance goals weakened over time.

Relationship to the Classroom Environment

While individuals are thought to have stable personal factors that influence their achievement goal orientations, "individuals can access different goal orientations in different situations, just as individual can access different content knowledge structures in different situations" (Pintrich, 2000a, p. 102). To investigate this, researchers have conducted studies that put participants in environments in which they are asked to do tasks that attempt to evoke achievement goals. For example, in a study of German high school students, participants were given set of mathematics problems and verbal test items, along with randomly-selected instructions indicating that the problems were either intended to identify particularly good performers (performance-approach goals), identify particularly poor performers (performance-avoidance goals), or teach them how to solve the problems or answer the questions (mastery goals). The students then scored differently: students in the mastery condition scored highest, followed closely by the students in the performance-approach condition, and more distantly by the students in the performance-avoidance condition (Elliot et al., 2005). The same experiment was tried with U.S. college students with a performance contingency—participants were led to believe that they would get additional extra credit points if they did well on the task. Under these conditions, those in the performance-approach condition outperformed those in the mastery condition, and both outperformed the performance-avoidance condition as before. These studies suggest that

classroom expectations/environment can positively or negatively impact goal orientation and student success.

Researchers have also addressed the link between students' perceptions of classroom goal structures and personal achievement goals. A classroom with a mastery goal structure would emphasize understanding and improvement, while one with a performance goal structure would emphasize competition and comparisons of ability. For example, in a study of Japanese junior and senior high school students, student perceptions of classroom mastery goal structure predicted the adoption of personal mastery goals by the students (Murayama & Elliot, 2009). A similar relationship was found in studies of high school students (Greene, Miller, Crowson, Duke, & Akey, 2004; Urdan, 2004). However, teachers do not often discuss the achievement goal structure of the classroom explicitly, and may give mixed messages about the goal structure (Urdan, 2004).

Relationship to Age

Many studies of achievement goals have been done with college students. However, there has also been research with younger students, and some of this research supports developmental changes in achievement goal patterns. In fact, in a meta-analysis of achievement goal measures (Chris S. Hulleman, Schrager, Bodmann, & Harackiewicz, 2010), researchers noted that grade in school was a significant moderator in over a quarter of the studies they reviewed, meaning that the age of students affected the results. In achievement goals, age seems to matter.

In some studies, goals tend to be strongly correlated with each other in younger students, but the correlations decreased as student age increased; in other words, older students had more differentiated goals (Bong, 2001, 2009; Ross, Shannon, Salisbury-Glennon, & Guarino, 2002). However, in other work, high school students reported goals that were highly intercorrelated and less differentiated (Witkow & Fuligni, 2007). In some of this research, the younger students reported learning goals most strongly, but the older students reported performance-approach goals most strongly (Bong, 2001, 2009). Because performance goals imply the use of social comparison, which is thought to increase with age, we might expect the incidence of performance goal orientation to be seen more strongly in older students than in younger ones. However, this relationship is not consistently reported, as some research has not demonstrated a trend toward performance goals in older students (e.g., Ross, et al., 2002). Researchers (Chris S. Hulleman et al., 2010; Middleton, Kaplan, & Midgley, 2004; Midgley, Kaplan, & Middleton, 2001) have pointed out that the school environment often gets more performance-focused as grade level increases, making performance-approach goals more adaptive for older students to have. Others, however, have suggested that mastery goals rather than performance goals become increasingly helpful for achievement in adolescence (Shim, Ryan, & Anderson, 2008). Goal patterns across ages, therefore, tend to be inconsistent from study to study and confounded with the expectations of the school environment.

Finally, research has demonstrated that with early adolescents, goals generally exhibit within-year rather than between-year decreases (Shim et al., 2008). Therefore, when studying goal patterns over years it is beneficial to measure them at the same time each year.

Intrinsic vs. Extrinsic Motivational Orientation

In order to find articles about motivational orientation, the ERIC and PsycINFO databases were searched with the keywords *intrinsic motivation* and *extrinsic motivation.* Relevant references from the articles found were also retrieved and reviewed.

Description

As important as achievement goals are to student learning, on their own they may not be sufficient to describe the motivational picture of developing students. This is because the complex process of learning over many years is likely to be related to multiple types of motivations. It is difficult to imagine students focusing on mastery goals in domains from which they derive no enjoyment, interest, or satisfaction. Therefore *intrinsic motivation*, satisfaction deriving from the activity itself, should be expected to play a role in motivating school performance (Csikszentmihalyi & Nakamura, 1989; Miller, DeBacker, & Greene, 1999). Intrinsic motivation is characterized by pleasure and enjoyment, interest, curiosity, and an intense focus on the task itself, as opposed to anything external to it (Deci, Koestner, & Ryan, 1999; Gottfried, Marcoulides, Gottfried, & Oliver, 2009; Henderlong & Lepper, 2002; Lepper, Corpus, & Iyengar, 2005; Patall, Cooper, & Robinson, 2008). People doing things for which they are intrinsically motivated like what they are doing and would choose to do it again.

While developing students may find learning and practicing to be enjoyable and interesting, they may also be aware that the skills they develop will result in rewards that are external to the learning. In many workplaces, tangible rewards such as raises, bonuses, new titles, or better offices are frequently used to reward or "motivate" employees. The winners of competitions might obtain medals or prize money. In other situations, the rewards are not tangible, but are still external and outward rather than internal, such as recognition from others or renown. The importance and effects of these types of extrinsic rewards are likely to vary with the individual. Intrinsic and extrinsic motivation are not thought to be mutually exclusive; research has demonstrated that students can hold both orientations at the same time, at different levels (Lepper et al., 2005; Lepper & Henderlong, 2000).

Relationship to Engagement and Achievement

According to Deci, Koestner, and Ryan, "Intrinsic motivation energizes and sustains activities through the spontaneous satisfactions inherent in effective volitional action" (1999, p. 658). Because it has to do with enjoyment and satisfaction, intrinsic motivation is associated with engagement, challenge-seeking, confidence, and persistence, and thus motivates the kind of engagement associated with deep learning (Deci & Ryan, 1985; Ryan & Deci, 2000). In a study of third- through eighth-graders, Lepper, Corpus, and Iyengar (2005) demonstrated that intrinsic motivation was positively correlated with grades and achievement test scores at each grade level,

while extrinsic motivation was negatively correlated with measures of achievement. Intrinsic motivation has been the preferred orientation for encouraging engagement and achievement.

Relationship to the Classroom Environment

Extrinsic Rewards and Intrinsic Motivation

In general, researchers have found that the presence of extrinsic rewards in the educational environment can undermine intrinsic motivation for learning. The more that students focus on external rewards the less they may focus on the task itself, which could ultimately undermine their interest in the task and their self-efficacy for completing it (Deci et al., 1999; Wolters, Yu, & Pintrich, 1996). For example, a child who is intrinsically motivated to read but who is in a program that tangibly rewards students to read books may eventually focus more on the rewards than on the joy of reading. In addition, extrinsic rewards can be seen as controllers of behavior, which has been demonstrated to undermine the volitional aspect of intrinsic motivation (Deci et al., 1999); these rewards essentially give students the message that whatever they are being rewarded for must be something that students normally need to be "made" to do and that therefore they should really not be interested in it. However, researchers have concluded that extrinsic rewards may not undermine intrinsic motivation if the rewards are unexpected, or not contingent on the performance of the task, because in those cases the students are not doing the task in order to get the rewards (Deci et al., 1999). There is also evidence that extrinsic rewards that provide information about competence and are presented in a manner that emphasizes their informational character, such as grades, also do not tend to undermine intrinsic motivation (Deci et al., 1999; Harackiewicz & Sansone, 2000). This information implies that extrinsic rewards, especially tangible ones, should be used very carefully by parents and teachers to avoid undermining intrinsic motivation (Deci et al., 1999).

Praise and Intrinsic Motivation

In reviewing the literature on the relationship between praise and intrinsic motivation, Henderlong and Lepper (2002) determined that praise can be helpful to intrinsic motivation if is seen by students as sincere, and if it promotes self-determination, encourages students to attribute their performance to causes that they can control, and establishes attainable goals and standards. Praise that is more person-oriented or ability-oriented (rather than task- or process-oriented) can have unintentional negative effects on intrinsic motivation when students have setbacks in the domain that was praised; students may think they have lost their ability and may react afterwards with helplessness. As with tangible rewards, teachers and parents therefore must use praise with caution.

Choice and Intrinsic Motivation

Patall, Cooper, and Robinson (2008) conducted a meta-analysis to determine the extent to which providing choice in the learning environment increases intrinsic motivation. They reported that choice can be helpful to intrinsic motivation, but only under certain conditions. Choice is helpful if it is not too laborious for the students to make the choice, and if the choice is not very crucial

to the task at hand. It is also helpful if students are not pressured to make a particular choice, and if rewards are not given after the choice is made. Students can be overwhelmed by too many choices; therefore, they recommended two to four.

Relationship to Age

Researchers studying intrinsic and extrinsic motivation in relation to child development have noted that while children in third through eighth grade report more intrinsic than extrinsic motivation, both types of motivation tend to decline over this grade span (Lepper et al., 2005; Lepper & Henderlong, 2000). Further research on eighth to tenth grade students in Canada demonstrated that intrinsic and extrinsic motivation continued to further decline across these grades. Students who went through a decline in intrinsic motivation in the transition to high school reported lower educational adjustment, including fewer positive emotions in class and less interest in school (Otis, Grouzet, & Pelletier, 2005). A study of German 8-9 year olds revealed that intrinsic motivation also declined when measured repeatedly over a year (Spinath & Steinmayr, 2008).

A meta-analysis of 128 studies on intrinsic and extrinsic motivation revealed that tangible rewards are more detrimental to intrinsic motivation for K-12 children than for college students (Deci et al., 1999). Deci and his colleagues speculated that the college students may be better at distinguishing the informational aspects of the rewards from the controlling aspects, and that they may be less subject to rewards from school and home that are intended to control or direct than are younger students.

Self-Efficacy

In order to find articles about preference for challenge, the ERIC and PsycINFO databases were searched with the keywords *self-efficacy* alone, or combined with *achievement* or *student outcomes*. Then relevant references from the articles found were also located.

Description

Self-efficacy is conceptualized to regulate human functioning including individuals' cognitive, motivational, affective, and decisional processes (Bandura, 1997). Several meta-analyses have shown that self-efficacy beliefs contribute to motivation and performance in diverse domains of performance, including academic achievement and persistence (Holden, Moncher, Schinke, & Barker, 1990; Multon, Brown, & Lent, 1991; Stajkovic & Luthans, 1998). Self-efficacy is conceptualized as being domain-specific, with an individual's behavior in any given situation predicted by self-perceptions in that specific situation. For example, a student may perceive him- or herself to be good at algebra and have high efficacy for a specific task for this subject, yet the same student might perceive his or her ability to write an essay as poor and have low efficacy for these types of tasks. Self-efficacy is not only the belief that a particular action is possible, coupled with the belief that the individual him- or herself can accomplish it. Self-efficacy also requires self-regulation in order to establish goals, develop a plan to attain those goals, commit to

implement that plan, actually implement the plan, and subsequently reflect and modify or redirect as needed.

Relationship to Engagement and Achievement

Research has documented how efficacy beliefs may relate to engagement as measured by effort and persistence. For example, a higher sense of efficacy will foster students' beliefs that they can perform the activities necessary for learning and be engaged longer on a difficult task. Students identified as low in ability on a specific math task, but high in self-efficacy, were found to engage on unsolvable problems longer than their low-efficacy counterparts (Collins, 1982). Additionally, efficacy beliefs may impact achievement vicariously through their mediating effect on engagement and persistence. Individuals with high self-efficacy will set higher standards for themselves after attaining a goal they have been pursuing (Bandura & Cervone, 1983).

Relationship to Classroom Environment

When students perceive they are progressing towards goal attainment, this reinforces self-efficacy, sending the message that students are becoming skilled at the learning goal (Elliot & Dweck, 1988). It is therefore important to provide students with feedback on their progress towards a goal because it raises self-efficacy (Bandura & Cervone, 1983), which in turn supports motivation and further skill development. Feedback that is framed as a student making positive gains toward a goal affects efficacy more positively than if negative feedback about goal attainment was given (Jourden, 1991). Research has shown that providing students with a specific proximal (short-term) goal increases self-efficacy and motivation more than providing general goals such as "do your best" (Bandura & Schunk, 1981). The type of feedback students receive in the classroom can impact their self-efficacy beliefs. Research has found that subjects given comparative feedback that their performance was lower than a normative group experienced declines in perceived efficacy, whereas subjects led to believe they had gained in comparison to a norm group experienced increased efficacy. Moreover, the normative feedback negated any past performance as a predictor of subsequent performance (Bouffard-Bouchard, 1990; Litt, 1988). Bouffard-Bouchard (1990) showed that when students were told they performed either higher or lower than a (fictitious) peer group, those whose perceived efficacy was raised tended to set higher goals for themselves and be more efficient at solving problems and using strategies. These results highlight the relation of perceived self-efficacy for predicting behavior as well as its impact on aspiration and strategic thinking (Wood & Bandura, 1989).

Social comparisons in the classroom also provide feedback that contributes to perceptions of efficacy. Perceptions of students can be influenced vicariously when they see their comparable peers succeed on a task. If a student judges him- or herself comparable to a friend who succeeds on a task, this can contribute to his or her own self-efficacy. However if that student experiences a subsequent failure it can negate this efficacy.

Relationship to Age

Little is known about whether there is a developmental trajectory for self-efficacy beliefs, because few studies have been able to track efficacy beliefs in the same group of individuals over time. However, researchers studying developmental differences have examined changes in perceptions of competence as they relate to gender. In general, few differences have been found for gender when examining general academic competence at the elementary school level (Stetsenko, Little, Gordeeva, Granshof, & Ottingen, 2002). Yet, as children age, gender-specific and subject-specific differences in competence beliefs emerge. For example, a meta-analysis found that boys had higher competence beliefs for math compared to girls (Hyde, Fennema, Ryan, Frost, & Hopp, 1990), and others found that girls were more competent in language arts (Crain, 1996; Eccles, Wigfield, Harold, & Blumenfeld, 1993), especially during high school. However a more recent study that followed the same group of students from first to 12th grade found that math competence beliefs decreased with age in both boys and girls similarly (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002). Such developmental patterns are theorized to emerge due to gender beliefs children hold that one gender is more competent in an achievement domain than another (Eccles, Adler, & Meece, 1984). Other research suggests that as children grow older they use different information to evaluate ability and this becomes more normative with age (Stipek & Mac Iver, 1989). Taken together, these findings suggest how larger social beliefs regarding gender competence may influence students' competence beliefs in academic areas. Furthermore, these studies also suggest that competence beliefs may affect students' interests and pursuit of activities. Thus, self-efficacy beliefs could have implications beyond high school as students make choices about courses and careers based on interest.

Collective Efficacy

Bandura (1997) expanded his view of efficacy beyond the self, to include the concept of collective efficacy—the belief that one is part of a group that has a collective capacity to accomplish a given task. Rather than being the sum of the self-efficacy of the individuals in the group, collective efficacy is thought to emerge as the group works together. Because learning expeditions rely on group effort to be successful, it would seem that collective efficacy would, along with self-efficacy, be a construct that is relevant to the theory of action in EL schools. Thus far, most research on collective efficacy has been conducted with adults or university students; in schools, it is often studied among teachers. In an ERIC search on the keyword collective efficacy, only 2 of 62 articles in peer-reviewed journals addressed collective efficacy with K-12 students. In a study of Canadian early adolescents (one group that averaged 11 years old and one that averaged 13 years old), Klassen and Krawchuk (2009) found that collective efficacy significantly predicted performance on solving puzzles and answering arithmetic questions. This was true when controlling for past performance and self-efficacy in the older group, but not the younger group. Cheng, Lam, and Chan (2008) found that Hong Kong secondary students in project-based learning groups who reported high-quality group processes performed better and had more collective efficacy than those in groups who reported low-quality group processes. This was true regardless of the students' status as academically high- or low-

performing, and regardless of students' own self-efficacy. Therefore, it seems that how the groups worked together had an influence on their efficacy and achievement.

In both studies, the researchers developed their own instruments for measuring collective efficacy based on Bandura's recommendations. Both of these instruments were specifically focused on the research task: puzzle- and problem-solving in the first study, and grades related to project-based group work in the second study (Cheng et al., 2008; Klassen & Krawchuk, 2009). No survey could be found that has been fully validated for the K-12 age group and would be appropriate for measuring collective efficacy outside of the context of the specific studies for which they were developed.

A collective group's efficacy has also been shown to be altered when given fictitious information about the group's performance relative to a norm group. In an experiment examining how collective efficacy operates on problem solving, a group's dissatisfaction with their poor performance combined with their strong sense of collective efficacy encouraged productivity (Prussia & Kinicki, 1996). Thus, perceived collective efficacy mediated the effect of feedback, whether positive or negative, on the goals the group set and related to the group's effectiveness.

Character

Social and academic domains are intimately intertwined. Children's social attitudes and behavior can promote or undermine their learning, and their academic performance can influence their social relationships and skills. In this review, we focus on the relationship of character to student outcomes (including, but not limited to, motivation, engagement, learning, and achievement), as well as how school environments can foster character.

The term *character* encompasses a number of interrelated constructs that are typically sub-classified in the literature as relating to relational character, moral character, or performance character. Constructs inherent in performance character, which may be defined as performing to one's greatest potential, are most accurately conveyed within the motivation and engagement research literature. These constructs are therefore described elsewhere in this review. Likewise, moral character is usually described as those behaviors typifying socially valued, ethical behavior (which may include such traits as empathy, responsibility, and honesty). Given both the normative nature of investigations into moral character, which may place a lesser or greater emphasis on some constructs depending on prevailing social sentiment, and several decades of research suggesting that the relationship between moral character and conduct are only modestly consistent, researchers have often criticized measures of moral character as inherently unstable.[3]

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[3] The degree to which exhibition of moral character is situation-specific remains a subject of intense debate among social scientists (Aksan & Kochanska, 2005; J. P. Rushton, Brainerd, & Pressley, 1983). For a review of extant literature on this subject, see (Eisenberg & Fabes, 1998; Grusec & Lytton, 1988; Radke-Yarrow, Zahn-Waxler, & Chapman, 1983).

For these reasons, researchers ultimately chose to focus on relational character, which refers to skills and behaviors that are needed for interacting effectively and responsibly with others. These behaviors include empathic responding, respect for others, a sense of fairness, honesty, and social competence (T. Lickona & Davidson, 2005).

Within the social sciences, relational character falls under the umbrella term of *prosocial orientation*, for which there is a substantial body of extant research. Prosocial orientation includes both attitudes and behavior that focus on identifying with and benefiting other individuals and society as a whole. In order to highlight recent research into relational character that has been conducted within the social sciences, the construct of relational character will be referred to as 'prosocial orientation' throughout this section.

We therefore begin by highlighting research on prosocial orientation as a general construct and how it is linked to important student outcomes and school/classroom environments. Because prosocial orientation is a broad construct comprised of more specific behaviors and attitudes, we follow the general literature review with a discussion of research related to several sub-constructs of prosocial orientation, along their relationships to student outcomes and school/classroom environment. Social responsibility and cooperation, two sub-constructs considered critical to the ELS Model, are described in greater detail within this section. While researchers initially considered including respect as a separate area of interest, this construct is typically subsumed under social responsibility in the literature, and has been treated here accordingly.

Description

The construct of prosocial orientation has been described in a number of different ways in the social psychology literature. Prosociality describes a tendency to identify with and benefit other individuals and society as a whole. Eisenberg (1986) defines prosociality as voluntary behavior intended to benefit others. Penner and Finkelstein (1998) take a broader view of prosociality, describing the construct as "an enduring tendency to think about the welfare and rights of other people, to feel concern and empathy for them, and to act in a way that benefits them." Developmental psychologists have identified several precursors of prosocial behavior, both cognitive—including abstract thinking, forethought, perspective taking, and hypothetical-deductive reasoning—and socioemotive, most critically in the area of emotional regulation (Carlo, Hausmann, Christiansen, & Randall, 2003; Eisenberg, Fabes, Guthrie, & Reiser, 2000; M. L. Hoffman, 1991). These processes have been associated with heightened sympathetic responding and improved moral reasoning, sociocognitive skills which directly influence the development of prosocial behaviors (Roberts & Strayer, 1996).

Relationship to Engagement and Achievement

While the bulk of research on the academic outcomes associated with prosocial behaviors have focused on their relationship to motivational and cognitive processes, a separate and compelling, line of inquiry examines the impact of prosocial goals on the interpersonal world of students.

This line of research on prosocial orientation stems back to McClelland (1955) and others (e.g., (Veroff, 1969), who first identified the need for approval as an important social motivator in the drive-theory tradition. Since then, several other investigators have recognized the broad range of social concerns and behaviors as important aspects of school-related motivation, including the willingness and ability to take on the perspectives of others, help others, be respectful and kind, comply with rules, cooperate, achieve a sense of belonging and acceptance, and to make positive changes to society as a whole. Such prosocial goals share much in common with academic goals in that they can help organize, direct, and empower individuals to achieve more fully, both in an academic setting and within the broader community.

Capara and colleagues found positive relationships between children's prosocial orientation and both academic achievement and positive peer relationships (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000). While the exact nature of these relationships has yet to be determined, it is possible that children with prosocial orientation have superior social skills that enable them to work better with peers and have more positive relationships with their teachers. Alternatively, it has been suggested that early prosocial orientation represents self-regulation abilities needed for later achievement. Consistent with this latter hypothesis, Johnson and colleagues found that prosocial adolescents have both higher achievement and intrinsic motivation toward schoolwork suggesting that prosocial orientation increases academic self-esteem (M. K. Johnson, Beebe, Mortimer, & Snyder, 1998).

Relationship to Classroom Environment

Research suggests that infants are born with ability that allows them to connect emotionally to other human beings (Sagi & Hoffman, 1994). As children grow up, however, further development of prosociality depends on relationships with others. For example, children whose parents are warm and responsive to their needs are more likely to develop prosocial behaviors (Zhou et al., 2002). As students transition from childhood to adolescence, they become increasingly dependent on social relationships with peers (Hartup, 1966). The importance of personal relationships for children, along with the increased significance of peer relationships for early adolescents, suggest that educators can have a tremendous influence on students' social growth by creating a school-wide culture in which each student has opportunities to see prosocial behaviors and attitudes modeled by other students and by adults. In such a culture, the way teachers treat students and the way students treat each other is part of their learning experience (T. Lickona, 1997).

In the literature, many contextual factors have been associated with prosocial behavior and thus have implications for school and classroom environments capable of shaping the prosociality of their students. Research has consistently shown that recognizing a situation as requiring assistance, involving personal responsibility, and enabling oneself to be helpful increase helping behavior (Penner, Dovidio, Piliavin, & Schroeder, 2005). Furthermore, individuals are more likely to behave in a prosocial manner towards similar or likable others (Penner et al., 2005), and towards others considered to be close (Graziano, Habashi, Sheese, & Tobin, 2007).

Rushton (1984) describes only moderate consistency in individuals' prosocial behavior across situations and contexts, which highlights the importance of contextual and environmental factors. For example, a child who emphasizes the importance of the welfare of others is more likely to exhibit prosocial behavior than children who are more self- oriented (Bardi & Schwartz, 2000). While factors related to a child's home environment are highly related to prosocial behavior, school environments can also have a large influence. For example, exposure to modeling of helping behavior and inductive discipline (e.g., explaining to children the consequences of their behavior) as opposed to power-assertive discipline (e.g., punishment) has been linked to increased prosocial orientation in children (Eisenberg & Fabes, 1998).

Positive peer relationships in schools have also been associated with increased prosocial orientation. For instance, Wentzel, McNamara, and Caldwell (2004) found that children's prosocial behavior is influenced by close friendships, wherein the greater the affective quality of the friendship, the more influential friends are to each others' social attitudes and behaviors. Furthermore, adolescents whose best friends display prosocial behaviors also tend to engage in such behaviors themselves (Barry & Wentzel, 2006).

Interventions Promoting Character and Prosociality
While positive, warm, and secure social relationships within school settings have been associated with children's prosocial orientation, it is necessary to conduct intervention studies to rule out the possibility that highly adjusted children are both prosocial and elicit positive reactions from others around them. Soloman and colleagues conducted a five year longitudinal intervention and found that training teachers to promote prosociality and developmental discipline increased children's prosocial orientation over time (1988). The program provided children with an opportunity to work collaboratively in small groups and participate in activities designed to promote social understanding. It emphasized prosocial attitudes by using relevant media and highlighting children's positive behaviors and provided opportunities for active helping such as a buddy program that assigned older children to help younger peers. Students participating in the intervention demonstrated more spontaneous prosocial behavior as measured through classroom observation than did students in a comparison group. Observational results were corroborated by teacher and student self-reports. The authors found that the results of the intervention were somewhat isolated, however. The program was not associated with changes in negative classroom behavior or a more general measure of supportive and friendly behavior.

In another school intervention study conducted by Fraser and colleagues (Fraser, Day, Galinsky, Hodges, & Smokowski, 2004), children received training designed to teach social problem-solving skills and to reduce peer rejection. Simultaneously, parents participated in home lessons focusing on child development, parent-child communication skills, social problem solving skills, and discipline. Results indicate that children in the intervention group demonstrated increased prosocial behavior in comparison to the children in the control group (Fraser et al., 2004).

Flannery and colleagues (2003) reported on another experimental school program wherein children showed longitudinal gains in prosocial behavior when their school climate was altered by teaching students, teachers, and staff five simple rules and activities: (1) praise people, (2) avoid put-downs, (3) seek wise people as advisors and friends, (4) notice and correct hurts one causes, and (5) right wrongs. As noted by McMahon and Washburn (2003), effective prosocial interventions often work to address students' perspective taking, empathy, and social problem solving skills and are often tailored to cultural, developmental, and behavioral characteristics of students.

Other interventions designed to promote prosociality have also demonstrated effectiveness. For example, Feshbach and Feshbach (1982) developed a school-based program involving small-group classroom activities, including role-playing and discussions of conflict resolutions. Children in the training group displayed higher frequencies of helping and cooperative behaviors than students in the comparison group, as well as a decline in aggressive behavior (Feshbach, 1983; Feshbach & Feshbach, 1982). In addition, preschool children who participated in an prosociality-oriented training program were reported as more tolerant, prosocial, and cooperative than children enrolled in an academic enrichment program that did not involve such training (Chiang, Douglas, Kite, Barber, & Webb, 2007).

Still other studies assessed outcomes associated with a program of direct instruction in altruistic behavior. Cashwell, Skinner, and Smith (2001) found that second grade students instructed to report the incidental prosocial actions of peers (i.e., helping behaviors) and to contribute feedback related to classroom progress adopted more prosocial behaviors according to teacher and self-reports than children not exposed to the intervention. By contrast, Goldberg (2004) found that a general character education program had no impact on prosocial development.

Finally, nascent research linking prosocial behaviors to school climate suggests that prosocial behavior exhibited by students may impact the classroom environment. Specifically, in a study of 1,168 New Zealand students in grades 4 through 8, Raskauskas et al. (2010) found that students who self-reported prosocial behavior were less likely to engage in bullying. On a separate measure of school climate, students who scored highly on a prosociality survey were more likely to indicate a strong connection to their school and positive relationships with their teachers.

The above research highlights the relationship of prosocial orientation to student outcomes, as well as demonstrates the existence of effective interventions for increasing prosocial orientation through school programs and interventions. As mentioned previously, prosocial orientation is an overarching construct in the social psychology literature, which has been studied both as a whole and teased apart into individual components for both theoretical and measurement purposes. In the following sections, we highlight the most salient components of prosocial orientation found in the literature and discuss their relationship to student outcomes and classroom environment: social responsibility and cooperation. Finally, we conclude this section on prosocial orientation

with a discussion of developmental trajectories and the nature of change in prosocial orientation across different age groups.

Social Responsibility

For this literature review on social responsibility, ERIC and PsycINFO databases were searched with the terms *social responsibility* and *prosocial and responsibility* alone and in combination with the terms *school*, *academic, and respect*. Relevant references from the articles found were also retrieved and reviewed.

Description

In the context of this literature review, the term *social responsibility* refers to a sense of accountability for the effects that one's behaviors might have on other individuals, the environment, and/or society as a whole. A student's sense of social responsibility might be measured by his or her adherence to social rules and role expectations within the classroom, school, or broader community settings (Ford, 1985; Ford, Wentzel, Wood, Stevens, & Siesfeld, 1989; Wentzel, 1991; Wentzel, Wood, Siesfeld, Stevens, & Ford, 1987). These rules exist as a reflection of broad social and cultural norms or as a result of respect for commitments to other individuals (Wentzel, 1991). Most relevant to social responsibility in an academic setting are systems of rules and norms that define the student role, such as rules and norms for interpersonal conduct as well as those that directly promote academic learning and performance. For instance, a variety of rules reflecting cooperation, respect for others, and positive forms of group participation guide social interaction in the classroom. Furthermore, students are expected to work hard, pay attention, participate in classroom activities, and complete assignments. Although not necessarily social in nature, these latter activities reflect rules of social conduct designed to guide the learning process (Wentzel, 1991).

Relationship to Engagement and Achievement

A substantial body of literature suggests that, in addition to being a valued student outcome in its own right, social responsibility is a critical student characteristic that directly contributes to learning and academic performance. Correlational studies have linked positive intellectual outcomes in elementary aged children with respectful interactions with peers (Cobb, 1972; Green, Forehand, Beck, & Vosk, 1980), to appropriate classroom conduct (Entwisle, Alexander, Cadigan, & Pallas, 1986), and to compliance (Cobb, 1972; M. Kohn & Rosman, 1973).In addition, social responsibility, as assessed by teachers and peers in self-reports of decision-making processes, has been positively associated with academic outcomes in high school (Wentzel et al., 1987).

Longitudinal studies have also linked social responsibility to academic performance. For example, Lambert (1972) found that adaptive classroom behavior in elementary school predicts both grades and test scores in high school, over and above early achievement and IQ. Similarly, Feldhusen, Thurston, and Benning (1970) found that disruptive and/or aggressive classroom behavior in 3rd and 6th grade was a strong, negative predictor of academic performance in 8th and

11th grade when controlling for IQ, gender, grade level, and urban-rural factors. Findings from longitudinal studies also link social responsibility with educational attainment. For instance, Parker and Asher (1987) found that antisocial behavior in the early grades was a strong predictor of dropping out of high school. Finally, intervention studies suggested that teaching children appropriate social responses to instruction such as paying attention, following instructions, and volunteering answers can lead to significant and stable gains in academic achievement (Cobb & Hops, 1973; Hops & Cobb, 1974).

Wentzel (1991) suggested several ways that social responsibility might directly contribute to achievement at school. For example, being socially responsible may contribute to learning by way of adherence to student role requirements for academic behavior. As suggested by Thomas (1980), academically relevant components of social responsibility, such as paying attention and time-on-task, can serve as an instructional means toward improved academic performance. Conversely, inappropriate and disruptive behavior is inversely related to engagement, learning, and achievement.

Socially responsible behavior can also play a role in facilitating the extent to which students are engaged in learning by facilitating positive social relationships with teachers and peers. Acceptance by teachers and peers has been consistently related to academic achievement at all ages, whereby socially rejected and aggressive children are especially at-risk for academic failure (Wentzel, 1991). Of relevance for this review is that teachers' preference for students is based in large part on student's socially responsible behavior. Likewise, acceptance by peers is related to responsible forms of behavior, whereas peer rejection is related to lack of such skills (Wentzel, 1991). Moreover, positive relationships with peers have been consistently related to positive academic outcomes (Cobb, 1972; Cohen, 1984; Green et al., 1980).

It is also important to note that social responsibility has been directly related to cooperation (a pro-social construct discussed in the next section). A study conducted by Cremer and Van Lange (2001) examined differences in the amount of cooperation displayed in group situations. They found that children who indicated greater feelings of responsibility to further the group's interests were more likely to cooperate than those who felt less responsible for the group's interests. The authors concluded that socially responsible individuals are inclined to maximize their own and others' outcomes, which in turn lead to greater levels of cooperation.

Relationship to Classroom Environment
Empirical work suggests that the development of social responsibility is a valued educational objective. For instance, in a survey of several hundred parents, teachers, and students regarding desired outcomes for students to achieve by age 18 (Krumboltz, Ford, Nichols, & Wentzel, 1987), social responsibility in the form of consideration and respect for others, interpersonal competence, and moral development was consistently indicated as a critical outcome for students to achieve, over and above academic achievement.

The notion that schools play a role in the development of social responsibility is supported by the literature indicating that teachers, in general, are sensitive to classroom conduct, value socially competent behavior, and spend an enormous amount of time teaching their students how to behave responsibly (Doyle, 1986). The development of socially responsible classroom behavior can be accomplished in several ways. First, interventions that teach specific self-monitoring and self-control strategies can be targeted at individual students who display impulsive or irresponsible behavior (for review, see O'Leary & Dubey, (1979)). Second, various classroom management practices can be used to establish group order and control (Doyle, 1986). For example, teachers can actively teach social norms and expectations for classroom behavior to their students or specify the appropriateness of various contexts for different types of behavior.

Blumenfeld and colleagues (Blumenfeld, Pintrich, & Hamilton, 1986) documented several ways in which social responsibility is taught in schools. In particular, they described teacher communications to students that relayed why the students ought to behave well, ascribed causal attributions to behavior (both good and bad), and provided sanctions for classroom misconduct. Results of this work suggest that teacher communications about student responsibility should reflect specific issues concerning academic performance, academic procedures (e.g., work management and staying on task), social procedures (e.g., when to talk and when to listen), and social-moral norms (e.g., showing respect for others). Furthermore, students who value responsible forms of behavior tend to contribute to social order in the classroom (Krumboltz et al., 1987). This is especially true when students as a group are held accountable for the behavior of the group's members (Sieber, 1979).

Cooperation

For this literature review on cooperation, ERIC and PsycINFO databases were searched with the terms *cooperative learning* and *prosocial cooperation*. Relevant references from the articles found were also retrieved and reviewed.

Description

Cooperation involves working interdependently with others to accomplish shared goals. Within cooperative activities, individuals seek outcomes that are beneficial to themselves and beneficial to all other group members. Cooperative behavior within a learning environment, often called cooperative learning, involves students working together to maximize their own and each other's learning and achievement.

Relationship to Engagement and Achievement

Over the past century, numerous research studies have been conducted on the relationship between cooperative learning environments and achievement (see Beckman, 1990 (1990; Donaldson, 1978; Fuchs et al., 2001; Gauvain & Rogoff, 1989; Gillies & Ashman, 1998; D. W. Johnson & Johnson, 1989; D. W. Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; D. W. Johnson, Skon, & Johnson, 1980; A. Kohn, 1986; Marzano, Pickering, & Pollock, 2001; Matheson, Torgeson, & Allor, 2001; R. E. Slavin, 1980; R. E. Slavin, 1983; Tudge, Winterhoff,

& Hogan, 1996; Whitman, 1988). A seminal meta-analysis conducted by Johnson and Johnson (1989) found that, regardless of the subject matter, cooperative learning results in significantly higher achievement and retention than do competitive and individualistic learning structures. The more conceptual and complex the task, the more problem solving required; additionally, the more creative the answers need to be, the greater the superiority of cooperative over competitive and individualistic learning. Besides higher achievement and retention, this meta-analysis (D. W. Johnson & Johnson, 1989) indicated that cooperation tends to result in more:

1) willingness to take on difficult tasks and persist, despite difficulties;
2) higher-level reasoning (critical thinking) and metacognitive thought;
3) creative thinking (process gain) characterized by more frequent generation of new ideas, strategies, and solutions than would occur individually;
4) positive attitudes toward learning tasks being completed, greater motivation to continue them, and comparatively higher levels of satisfaction with class and school; and
5) greater time spent on learning tasks.

Some studies have shown that pairing academically stronger students with those with weaker skills—as early as kindergarten—improves outcomes for *all* students involved because it provides opportunities for practice that fosters acquisition of new knowledge and transfer of content knowledge and skills (Fuchs & Fuchs, 2005). Additionally, by breaking students into interactive teams, a wider variety of problem-solving techniques and peer-teaching strategies may help students become more effective problem solvers (Hake, 1988). Moreover, as noted by Jenkins and O'Connor (2003), the practice of cooperative learning is useful because it aids in classroom management and provides a means for teachers to deliver differentiated instruction.

In a study of the relationship between classroom conditions and engagement in learning involving observations of third grade classrooms, Downer, Rimm-Kaufman, and Pianta (2007) found that children were more likely to be engaged in learning when they were working cooperatively within small groups as opposed to doing large group activities or being in individualized work settings. Furthermore, children at risk for school problems particularly benefitted from small group cooperative learning.

In addition to direct benefits of cooperation on student achievement, there may also be social-emotional benefits for students, which in turn help foster their academic success. Specifically, research has shown that low-achieving students and students with learning disabilities are better known and better liked by their peers in classrooms that utilize cooperative learning strategies (Fuchs, Fuchs, Mathes, & Simmons, 1997). Furthermore, cooperative learning may help alleviate what has been called *stereotype threat* in minority children. Research suggests that minority students, Black students in particular, tend to have a keen awareness of negative stereotypes of their racial groups (Steele & Aronson, 1995). These stereotypes are thought to manifest themselves in a number of ways, not the least of which is high anxiety about taking tests and

lowered academic achievement (Aronson & Inzlicht, 2004). If cooperative learning fosters more acceptance among peers as research suggests (Wentzel & Watkins, 2002), it may also alleviate some of the stereotype threat experienced by minority students and thereby diminish its negative influence on achievement.

In cooperative classrooms, there is a positive interdependence among students' goal attainments; students perceive that they can reach their learning goals if, *and only if*, other students in the learning group also reach their goals (Deutsch, 1962; D. W. Johnson & Johnson, 1989). Research has shown that cooperation in classrooms exerts noteworthy effects on a variety of social-affective variables (Sharon, 1980). Since 1940, over 180 studies have compared the impact of cooperative, competitive, and individualistic efforts on personal relationships. Cooperative classroom environments, compared with competitive and individualistic environments, promoted considerably more liking among individuals. In addition, these positive feelings were found to extend to superiors in the organizational structure. Thus, individuals tend to care more about each other and be more committed to each other's success and well-being when they work together cooperatively than when they compete to see who is best or work independently from each other (D. W. Johnson & Johnson, 1989).

Relationship to Classroom Environment

Four types of cooperative instructional techniques have been discussed in detail by Johnson and colleagues. *Formal cooperative learning* involves students working together, for one class period to several weeks, to achieve shared learning goals and complete jointly specific tasks and assignments (e.g., decision making or problem solving, completing a curriculum unit, writing a report, conducting a survey or experiment, reading a chapter or book, learning vocabulary, or answering questions at the end of a unit (D. W. Johnson, Johnson, & Holubec, 1998a; D.W. Johnson, Johnson, & Holubec, 1998b). In formal cooperative learning groups, teachers can use the following techniques:

1. make a number of preinstructional decisions;
2. explain the task and the positive interdependence among students;
3. monitor students' learning and intervene within the groups to provide task assistance or to increase students' interpersonal and group skills;
4. evaluate students' learning and help students process how well their groups functioned.

In contrast, *informal cooperative learning* consists of having students work together to achieve a group learning goal in temporary, ad hoc groups that last from a few minutes to one class period (D.W. Johnson et al., 1998b; M. K. Johnson et al., 1998). These groups can be used during lectures, demonstrations, or films to focus student attention on the material to be learned, set a mood conducive to learning, set expectations for future work, ensure students cognitively process material being taught, and/or provide closure to an instructional session. Informal

cooperative learning may also include focused discussions before or after learning sessions or "turn to your partner" discussions dispersed throughout the session.

Cooperative base groups are long-term heterogeneous cooperative learning groups with stable membership (D.W. Johnson et al., 1998b; M. K. Johnson et al., 1998). The purpose of this type of group is to provide support, help, encouragement, and assistance to each member's need to make academic progress and develop both cognitively and socially. These groups typically meet daily or at least whenever the class meets.

The final type of cooperative learning is *academic controversy*, which exists when one student's ideas, information, conclusions, theories, and opinions are incompatible with those of another student, and the two seek to reach an agreement (D. W. Johnson & Johnson, 1979, 1995). Teachers can structure these academic controversies by choosing an important intellectual issue and assigning positions to students. Students then work in pairs or small groups of students assigned to the same position to prepare the best case possible for their position. Then, they persuasively present that case to another group of students with a different position and engage in an open discussion about each position with persuasive argument and critical analysis. This is followed by a repeat of the entire process with students taking the reverse perspective on the issue. Finally, the students work together to reach a consensus as to the best-reasoned judgment about the issue. Note that while there may be elements of competition in academic controversy, the process is cooperative in that students are working together to form arguments and then reach a consensus at the end having learned different perspectives from one another.

While it is unclear which, if any, of these types of cooperative learning strategies is superior, it seems that all four could be incorporated into a single course to enrich the collaborative nature of the learning environment. The strategies can be applied to any content area, for any age group, and they are particularly useful for organizing course routines and generic lessons that occur repeatedly.

Relationships of prosocial orientation with age

Research on the stability of prosocial orientation has mixed results, with different sub-constructs showing different patterns of change over time. Indeed, this has implications for both the parsimony of the overarching construct as well as measurement timing and specificity.

Researchers have conducted several longitudinal studies in order to examine (a) whether or not prosocial orientation in childhood is predictive of prosocial behavior in adulthood, and (b) whether or not prosocial development demonstrates a stable trajectory over time. In one such study, Eisenberg and colleagues (1999) report that preschool children exhibiting spontaneous sharing, perspective taking, and sympathetic understanding were more likely to self-report a prosocial orientation 17 years later. The authors evaluated prosocial tendencies using a variety of methods, including classroom observations; teacher, friend, and maternal surveys; and several

self-report measures capturing prosocial behaviors. While the study sample size was small (*N*=32), the authors' findings suggest that prosocial orientation is relatively stable over time.

Using a much larger sample of students, Nantel-Vivier et al. (2009) conducted independent longitudinal studies of prosocial development from late-childhood to mid-adolescence among a sample of Canadian and Italian students. Study design varied somewhat between the two sites, particularly with regard to outcome measures[4]. Additionally, Canadian students included in the study were largely from low-SES backgrounds, whereas Italian students came from median SES households. Findings were somewhat mixed, with some students demonstrating a decline in prosocial tendencies and others remaining relatively stable over the course of the study. In explanation of their findings, the authors posit that most individuals begin to refine prosocial behaviors over time by narrowing them to close peers and family members. Findings from the study were complicated, however, by the relatively low correlation between teacher and maternal survey responses, as well as between teacher and self-reported responses. These findings may indicate that self-reported measures of prosocial development are more descriptive when combined with classroom observation, as in Eisenberg et al. (1999).

In contrast, other research suggests an increasing trend in prosocial orientation over time. Specifically, a meta-analysis by Eisenberg and Fabes (1998) indicated that prosocial behavior tends to increase with age, although depending on the methodological aspects of each study, increases varied in size. In one study, about 60 percent of 4-year old children demonstrated prosocial behavior by donating at least one of 10 stickers they received to a peer, and about 85% did so at age 9. Furthermore, this increase with age was markedly greater for higher-SES children compared to lower-SES children. From childhood to adolescence, further increases were shown in sharing behaviors, but not in helping or providing emotional support (Eisenberg & Fabes, 1998).

Increases in prosocial behavior with age have been attributed to several factors such as increases in cognitive abilities associated with detecting others' needs and determining ways to help and in the moral understanding of the importance of helping others. As noted by Krebs and Van Hesteren (1994) and Hoffman (1982), attention to the needs of others transforms self-oriented affect to other-oriented affect and renders it increasingly altruistic. As they age, children develop an increasing refined understanding of others' emotional states and cognitive processes, and can better decode emotional cues (for a review, see Eisenberg, Murphy, & Shepard, 1997). In turn, this enhanced perspective taking and related sociocognitive skill are likely to increase prosocial responding. Lastly, it has been argued that children in middle school and high school are more likely to have dispositions toward civic engagement than younger children because it is around this age that young people begin to understand abstract concepts such as democracy and what it

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[4] Researchers obtained teacher and mother reports for the Canadian sample over a five year period (ages 10 to 15). Self and teacher reports were collected for the Italian sample over a four year period (ages 10-14).

means to be a citizen (Piaget, 1981), as well as the broader impacts of their civic or social involvement.

Another question related to the development of prosocial behavior is its relationship to academic performance over time. There is reason to believe that the influence of prosocial orientation on achievement is stronger in early elementary grades than in upper grades. Specifically, teachers empathize and are more affected by children's social behavior in the early grades of elementary school. In addition, social immaturity or difficulty adapting to an academic context (e.g. social responsibility – paying attention, following rules) are frequently cited by teachers as reasons for retaining children in the early grades, whereas academic achievement is the reason for retention in later grades (Agostin & Bain, 1997; Cadigan, Entwisle, Alexander, & Pallas, 1988; Dauber, Alexander, & Entwisle, 1993). Moreover, younger children, who are still learning to differentiate teacher and parents roles, may also be more affected by the quality of their relationship with teachers than are older children, and there is strong evidence that young children's social skills predict the closeness of their relationships with teachers (Birch & Ladd, 1998; Pianta & Stuhlman, 2004).

In sum, the research findings on the developmental trajectories of prosocial orientation are mixed with some findings showing increases with age and some showing relative stability or even decreases. Additional research is necessary to understand how different sub-components of prosocial orientation may have differential relationships with age and the implications for measurement and for predicting student outcomes.

Engagement in Learning

When reviewing literature related to student engagement, researchers considered both individual learning behaviors and the impact of student relationships to their external environments. In the model, traditional indicators of student engagement such as effort and persistence are linked to a broader identification with external institutions—namely, school and society. The model assumes a reciprocal relationship between these environments and student engagement (i.e., engaged students are more likely to feel connected to their learning environment and to the broader community, which in turn stimulates student engagement). Within the context of this literature review, identification with school is defined as the tendency of students to feel a sense of belonging towards their school, to value the institution of learning, and to feel responsibility for school-related outcomes. Civic engagement describes the propensity of students to exercise the rights and responsibilities of citizenship and promote the common good of society.

Student engagement refers to sustained, thoughtful attention to learning tasks. It includes both the cognitive and behavioral components of active involvement; both are necessary for students to be considered engaged in learning. A student who is only cognitively engaged is thinking deeply about the learning task, but without behavioral engagement will not accomplish what is necessary. A student who is only behaviorally engaged may appear to be fully concentrating on

completing the learning task, but is not thinking deeply about it and is instead just going through the motions.

The important of engagement to learning is summed up by Skinner and Belmont (1993), who wrote:

> Children who are engaged show sustained behavioral involvement in learning activities accompanied by a positive emotional tone. They select tasks at the border of their competencies, initiate action when given the opportunity, and exert intense effort and concentration in the implementation of learning tasks; they show generally positive emotions during ongoing action, including enthusiasm, optimism, curiosity, and interest. The opposite of engagement is *disaffection*. Disaffected children are passive, do not try hard, and give up easily in the face of challenges. Disaffected children can be bored, depressed, anxious, or even angry about their presence in the classroom; they can be withdrawn from learning opportunities or even rebellious toward teachers and classmates. (p. 572)

Student engagement is thought to be essential to achievement because engaged students are doing the work necessary for learning. High levels of student engagement can even explain why some at-risk students are able achieve at high levels (Connell, Spencer, & Aber, 1994; Finn, 1993).

Of the various aspects of engagement, two of the most important are *effort* and *persistence*. Students who expend effort in learning focus and concentrate on deeply processing the information. Students who demonstrate persistence remain actively involved in the learning task, and do not give up even if it becomes difficult. In research, effort and persistence have successfully predicted achievement. For example, in studies of high-school mathematics students, Miller et al. (1996) determined that effort (when self-report surveys were all done at one time) and persistence (when surveys were done over two time points) predicted mathematics grades. A similar relationship between effort/persistence and achievement was also found with college students (Elliot, McGregor, & Gable, 1999; Phan, 2009). In a study of Belgian high school students, researchers (van de Gaer, Pustjens, van Damme, & de Munter, 2009) demonstrated a longitudinal relationship between effort and language achievement over four years. Not surprisingly, students who try hard and do not give up easily are able to achieve student success outcomes.

In the model, engagement is presumed to mediate the influence of character/prosocial orientation and motivation on student success outcomes. Engagement is the behavioral link—the link to what students *do*— between the inner mental states of motivational and prosocial orientation and student success.

Identification with School

For the review of literature on identification with school, the Professional Development Collection and PsycINFO were both searched with the terms *belonging* and *school.*

Description

Identification with school is a sense of belonging to the school community (Osterman, 2000). It is a multidimensional construct that includes both affective and cognitive components (McMahon, Parnes, Keys, & Viola, 2008; Nichols, 2006). The affective components focus on a sense of acceptance, inclusion, and connection with peers, teachers, and school (Goodenow, 1993). Students who identify with school value school and school-related outcomes. They recognize and appreciate the challenges of the curriculum and instruction. The cognitive components address self-regulation and ability to maintain positive interpersonal relationships.

According to Goodenow (1993), a sense of belonging to a school community is to be understood as "neither a purely personal intrapsychic phenomenon nor as entirely the function of the school environment, but rather as arising from the person *within* a particular school environment" (p. 87). Some scholars approached the subject with an emphasis on the qualities of a school environment that promote feelings of belonging, while others emphasized student outcomes that purportedly result from a caring and encouraging school environment. Goodenow (1993) identified four aspects of a sense of belonging when developing her measure, the *Psychological Sense of School Membership Scale (PSSM)*. These are (a) perceived acceptance and liking by others, (b) perceived respect and encouragement for participation by both teachers and students, (c) feeling and being part of the school in general, and (d) expectancy-value motivation toward school work.

Researchers studying successful schooling in the Chicago Public Schools have tried to emphasize both the personal intrapsychic and social climate of the school in approaching school belonging. The Chicago Public Schools research, published by Osher, Kendziora, and Chinen (2008), is based on a conceptual model that includes four components of school belonging: perceived safety, perceived academic rigor, receipt of support and caring, and social and emotional skills. Students, who are connected to school and feel a sense of belonging, are those who feel safe, supported, and challenged at school, and have social-emotional skills to handle difficulties (Osher et al., 2008). Each of these components is defined and explained below:

> *Perceived safety* refers to feelings of emotional and physical safety and perceptions about the overall school climate. Perceived safety come from being trusted and respected. Students who feel safe at school are comfortable taking personal and academic risks.

> *Perceived academic rigor* refers to high expectations and perceived press for academic achievement. It also refers to feeling that the academic expectations connect with one's life goals. When challenged with high expectations and shown respect by a can-do attitude, students have a strong personal motivation to succeed. Goodenow (1993)

addressed this component by including two aspects of academic motivation in the development of scales for measuring a sense of school membership; these two aspects were (a) expectancy for success and (b) the value a student placed on academic schoolwork.

Support and caring refers to perceptions of encouragement and helpfulness and recognition that adults are working together on one's behalf. Students who identify with school have teachers and other adults in school who personalize their teaching and related interactions with students to meet individual learning needs and match individual interests (Uwah, McMahon, & Furlow, 2008).

Social and emotional skills refer to the dispositions, knowledge, and skills involved in social competence. Students who feel they belong to their school community are emotionally intelligent and culturally competent who can handle difficulties without disruption. They are responsible, persistent, and cooperative team players who can maintain positive interpersonal relationships and positively contribute to their school and community.

The Goodenow (1993) and Osher et al (2008) models of school belonging are consistent with the core component of the Hulleman, Hartl, and Ciani (2009) view of school belonging. The Hulleman, Hartl, and Ciani (2009) model of school belonging, or connection to school, is summarized in a table excerpted from their report and presented below. As can be seen in the table, relevance to life and interest in academic topics are included in this view, in addition to school belonging. For the Goodenow (1993) and Osher et al. (2008) models, interest and relevance are factors embedded in school belonging and operationalized through teachers and staff respecting and encouraging students, holding high expectations (perceived academic rigor), and personalizing teaching to meet individual needs and interests (Uwah et al., 2008).

Table 1: Connection to School Model (Hulleman, Hartl, and Ciani, 2009)

Relevance to Life	The extent to which the topics and activities that students engage in at school are relevant and useful to students' present and future lives	(Eccles (Parsons) et al., 1983)	Relevance to life positively related to test-taking effort, self-efficacy, intrinsic motivation, academic achievement, time on task, and learning goals.
School and Classroom Belonging	The extent to which students feel respected, comfortable, and belong as a member of the school (school belonging) and connected to their peers in the classroom (classroom community)	Goodenow, 1993	School belonging positively related to achievement, perceived scholastic competence, work orientation, and sense of self-worth. Classroom belonging positively related to self-efficacy, mastery goals, task value, participation, intimacy goals, responsibility goals, and negatively related to resistance to classroom norms and approval goals.

Interest in Academic Topics	The extent to which students find academic topics enjoyable, meaningful, and interesting, either in the short-term (situational interest) or over time (enduring interest)	(Hidi & Renninger, 2006)	Interest positively related to mastery goals, deep processing, final course grade, self-esteem, locus of control, positive emotions, attention, exploration, meaningfulness, involvement, propensity to work with others, use of meta-cognitive strategies, degree aspirations; negatively related to work avoidance, substance use, and school misbehavior.

Relationship to Engagement and Achievement

The importance of identification with school is related to a school's capacity to meet students' basic psychological needs for safety, belonging, autonomy, and competence. Referred to as *school bonding*, Schaps (2005) explained that "when these basic needs are fulfilled, students are more likely to become engaged in, and committed to, the school and, therefore, inclined to behave in accord with its expressed goals and values" (p. 41). In a review of research on school belonging, Osterman (2000) concluded that students who feel they are an important part of school, and that they are accepted and included, are more likely to engage in school.

Feeling connected to school may mitigate the effects of school stressors on student performance by offering social resources (e.g., support from teachers, coaches, and counselors) and allowing students to handle the stressors and succeed academically (McMahon et al., 2008). Goodenow (1993) maintained that feelings of school belongingness influenced academic achievement through the expectancy-value aspect of motivation. Students who have a feeling of belonging at school have the drive to engage in academic tasks because they expect to succeed and value their academic work. The levels of expectancy and value are influenced, in part, by the extent to which students feel like they are important members of the school or classroom (Goodenow, 1993).

Research also suggests that connectedness to school tends to be weaker among high school than middle school students (Osher et al., 2008). In addition, the strength and meaningfulness of the different components of a sense of belonging to school differ among student subgroups. For students of poverty, safety and academic rigor are as important to academic achievement as they are among middle class students, but perceived supports and social bonds at school and social skills have a zero or negative relationship with academic achievement among poor students. Osher et al. (2008) suggested that among poor students, factors outside of school support and social skills hugely affect their academic achievement, leaving little variance to be explained by perceived support or social skills.

Relationship to Classroom Environment

The research that links identification with school to qualities of classroom and school environments primarily used data from student, teacher and parent rating instruments and correlational analyses. The findings consistently show strong, positive relationships between supportive and responsive learning environments and student outcomes, including academic

achievement, commitment to school, and the reduction of problem behaviors (Schaps, 2005). For example, in those classrooms and schools that demonstrate an ethic of caring, provide students choice opportunities, and teach social skills (e.g., cooperation) through modeling, role playing, and teacher reminders and redirection, students and teachers report fewer problem behaviors and higher social competence as compared to comparison students not in classrooms exhibiting these conditions (Cook, Murphy, & Hunt, 2000; Schaps, 2005).

One quasi-experimental study related to identification with school was of inner-city Chicago schools implementing James Comer's School Development Program (SDP), which was designed to improve school climate and identification with school. The program was focused on putting student interests before staff's interests, collaborating with parents, addressing mental health issues through provision of mental health supports, and practicing problem resolution rather than blaming, although the schools did not implement all program particulars (Cook et al., 2000). In a quasi-experimental study matching SDP schools to control schools, Cook, Murphy and Hunt (2000) reported positive impacts for SDP on increasing achievement and reducing problem behaviors, but not a parallel increase in "wholesome" behaviors, such as time doing homework, reading, participating in club activities or sports. A follow-up study showed that SDP's influence on reducing problem behaviors was not robust for behavior outside of school, at least in relation to involvement in the juvenile justice system. In the follow-up study on SDP's influence on problem behaviors, Cook and Hirschfield (2008) used juvenile system records to measure acceptable and unacceptable behavior. No evidence supported the view that SDP reduced delinquency when archival records from the juvenile system were used to measure student outcomes (Cook & Hirschfield, 2008), however. Cook and Hirschfield (2008) indicated that programs that intend to increase identification with school and improve school climate are difficult to implement in struggling schools and may not reduce delinquency.

Positive effects of identification with school appear to be conditioned on the level with which the supportive and responsive qualities of the environment are implemented. In his review of research on school reform programs that focused on establishing supportive school environments, Schaps (2005) concluded that *if* implemented with high fidelity and consistently from class-to-class and grade-to-grade, such programs had positive effects on student achievement, commitment to school, and the reduction of problem behaviors. The influence of a positive climate and supportive relationships in schools and classrooms also appears to depend on the outcome measured. School and classroom climate and relationship quality are often measured by perceptions of teacher support, encouragement, and warmth (Booker, 2006).

Civic Engagement

For this literature review on civic engagement, ERIC and PsycINFO databases were searched with combinations of the terms *civic engagement*, *civic disposition*, and *prosocial and school*. Relevant references from the articles found were also retrieved and reviewed.

Description

Students demonstrating civic *engagement* are inclined to exercise rights and responsibilities of citizenship and promote the common good of the society. Civic engagement can take the form of community service, political activism, environmentalism, and/or other volunteer activities that provide needed services to community residents and psychological, social, and intellectual benefits to participants.

Relationship to Engagement and Achievement

There is a substantial body of research supporting the notion that children who are most engaged in service and leadership within their communities are most likely to thrive in other aspects of their lives (Dávila & Mora, 2007; Hamilton & Fenzel, 1988; Kraft, 1996; Lerner, 2004; Moore & Allen, 1996; Scales & Blyth, 1997; Schumer, 1994). They tend to perform better in school, are healthier, and are less likely to get in trouble. Although the causal relationships are complex and contested, it seems likely that civic engagement enhances development by giving young people positive motivations, beneficial peer-networks, and feelings of self-worth.

It has been suggested that civic engagement activities benefit youths primarily by addressing their need for (1) information and technical and academic knowledge; (2) social support and interaction; and (3) meaning in life (McDevitt & Chaffee, 2000; Weiler, LaGoy, Crane, & Rovner, 1998). Civic engagement programs that focus on only one of these needs may not be effective. For instance, over two-thirds of youths are proficient in civic knowledge (Niemi & Chapman, 1999; Wirt et al., 1998) and say they want to volunteer in the future (Harris Interactive, 2001), but only 14 percent actually participate in political organizations or clubs, and fewer than 50 percent undertake community service (e.g. Flanagan, Bowes, Jonsson, Csapo, & Sheblanova, 1998; Niemi & Chapman, 1999). As discussed later, research suggests that giving youth social support and helping them understand the importance of their participation are important factors in achieving positive outcomes.

Short-term outcomes of civic engagement include improved grades and attendance at school, increased self efficacy, recognition of the importance of participating in the political system, and socially responsible, community-oriented attitudes (Calabrese & Schumer, 1986; Giles & Eyler, 1994; Hamilton & Fenzel, 1988; Shumer, 1994). Long-term outcomes include increased likelihood of voting in adulthood, commitment to future service, decreased likelihood of dropping out of school, improved transition from school to work, and a strong intrinsic work motivation (Giles & Eyler, 1994; M. K. Johnson et al., 1998; Kraft, 1996; Scales & Blyth, 1997).

Relationship to Classroom Environment

A number of variables related to a child's classroom and/or school culture seem to predict the development of civic engagement in children. These include exposure to civics education (Torney-Purta, 2002); teacher behavior and instructional style (Flanagan & Tucker, 1999); participation in school activities (Barber & Eccles, 1997; Niemi & Junn, 2000) and in other

youth programs (Larsen, 2000); and engaging in community service (Walker, 2002; Youniss, McLellan, & Yates, 1997). These variables will be discussed in turn below.

Education. It is critically important that children come to understand the nature of their governments, how they can participate, and the significance of their informed participation (Sherrod, Flanagan, & Youniss, 2002). A typical vehicle for acquiring this information is civic education, which some argue should be of the same national priority as math and science education (Sherrod, 2003). However, civics education does not receive a great deal of attention in most school systems, and in general, youth's knowledge of civics is low across nations worldwide (Torney-Purta, 2002).

Instructional variables. Even more important than the content of civics education may be the manner in which civics education is taught. Torney-Purta (2002) suggested that open dialog, allowing students to discuss issues, is important, as is teacher behavior and school climate. If teachers treat students fairly, the students in turn tend to behave fairly in interactions with others (Flanagan & Tucker, 1999). Hence, the "how" of education, including civics education, is as important as the "what."

School activities. Research has shown that children who participate in extracurricular school activities and other community youth organizations have higher levels of civic engagement than adults (Barber & Eccles, 1997; Jennings & Niemi, 1974; Verba, 1995).

Community service. Lastly, volunteering and community service have been found to relate to later civic engagement (Youniss et al., 1997). Reinders and Youniss (2006) conducted an analysis of a longitudinal data set of high school students in order to examine the role of school-based community service in promoting adolescents' prosocial behavior and intended future civic involvement as a function of service type and students' perceived experience. Results showed that service involving direct interaction with people in need led students to judge that they had made salient contributions to sponsored organizations and as a result, enhanced their self-awareness. Students' altered self-awareness was in turn related to increased reports of helping behavior toward strangers, future volunteering and voting, working on a political campaign, and demonstrating for a cause. Causal analyses supported the directional sequence beginning with service experiences as part of school curriculum, which led to prosocial behavior, and eventuated in intended future civic involvement.

Volunteering and community service activities are in fact the closest behavior to adult civic engagement possible for youth and can continue through the full life span. Therefore, a school culture that values and encourages these activities is perhaps the most important structure for enhancing civic engagement in youth. However, the act of doing service does not necessarily mean that it will lead to the development of positive outcomes. Research indicates that the greatest benefits occur when service is voluntary, includes an opportunity for reflection with a mentor, and involves real service with individuals different from oneself (Youniss et al., 1997).

Thus, simply mandating service is not sufficient; youth must internalize the importance of their service for benefitting society, which would in turn carry the positive benefit of promoting continuation of the service as well as other forms of contribution.

Many programs have been implemented with the goal of engaging young people in civic activities. A successful program engages youth in their communities, provides them with tangible results of their engagement and with needed social support and interaction, and provides meaning in their lives by fostering a sense of being part of the community (i.e., a "civic identity"; Michelsen, Zaff, & Hair, 2002).

In a synthesis of research conducted by Michelsen and colleagues (Michelsen, Zaff, & Hair, 2002), evaluations of school programs aimed at increasing civic engagement in youth suggested that programs of this nature may result in improved achievement on academic tests, lower dropout and suspension rates, improved engagement with school, positive orientation toward work, reduced likelihood of alcohol consumption and improved reactions to situations involving drug use, improved attitudes toward older people, increased likelihood of performing community service activity, increased attention to the news, and decreased likelihood of teen pregnancy and childbearing. It is important however to note the limitations of this study and conclusions. First, findings from quasi-experimental or correlational studies, upon which these conclusions are in part based, do not establish causality. Furthermore, civic engagement programs span a wide range of aims, and accordingly, result in different outcomes. Thus, researchers do not yet know whether a single program can affect civic engagement constructs, such as voting, volunteering, and environmentalism, or whether multiple programs are needed to bring about multiple outcomes. Lastly, most of the programs studied had several components, one of which was civic engagement. Thus, it impossible to tell whether civic engagement, other components, or a combination of components resulted in the positive outcomes.

Based on the results of their synthesis, Michelsen et al. (2002) also described program and participant characteristics that are associated with the positive outcomes listed above. First increasing civic efficacy and civic knowledge (for example, through civics education courses) may increase civic engagement (McLeod, 2000; Niemi & Chapman, 1999). Second, increasing opportunities for participation may increase actual participation (Hart, Atkins, & Ford, 1999; Nolin, Chaney, & Chapman, 1997). Third, being aware of individual differences may improve program effectiveness (e.g. McDevitt & Chaffee, 2000). Fourth, involving students in the development and implementation of a civic engagement program may increase participation and the success of the program (Garvey, McIntyre-Craig, & Myers, 2000). Finally, giving students time to reflect and time to see the effects of the program are both potentially important factors in success (Conrad & Hedin, 1982; Katula, 2000).

Conclusion

The constructs highlighted in this theory of action are intended to capture the goals beyond academic achievement that ELS has for students. In an EL school, students are expected to exhibit prosocial character traits that foster a healthy learning environment for everyone. The learning expeditions are intended, in part, to involve them intensely in an intrinsically motivating and mastery-oriented experience that will support their self-efficacy. Together, the emphasis on character and motivation creates an atmosphere that encourages engagement through effort, persistence, civic engagement, and identification with school. Engagement then leads to student academic success.

The reviewed literature pertaining to the ELS theory of action model clearly highlights the importance of attending to the "whole" child. Children do not develop in particular domains independently; rather, development in the social/emotional/motivational domains and development in the academic domains are inextricably connected. Efforts to improve development in one domain will be more successful if attention is given to development in others. Through the various feedback loops represented in the model, the intense focus of EL schools on multiple aspects of development will likely have strong and lasting impacts on the future academic and life success of the students.

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