Educational Considerations

Volume 49 | Number 1 Article 4

2023

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Recommended Citation

Taylor, Sara E. (2023) "An Application of the CCSR Noncognitive Framework: Bringing Together Typical and Exceptional Student Research," *Educational Considerations*: Vol. 49: No. 1. https://doi.org/10.4148/0146-9282.2342

An Application of the CCCSR Noncognitive Framework: Bringing Together Typical and Exceptional Student Research

Sara E. Taylor

Students, teachers, and educational researchers divide into typical or exceptional populations. This includes different classes, credentials, and research journals that depend on the student's ability level. This distinction creates two concurrent yet separate bodies of educational research. Students with disabilities are increasingly included in general education classes yet research continues to separate the populations. According to the 42nd Annual Report to Congress, in 2018, 95% of students aged 6 to 21 served under the Individuals with Disabilities Education Act, were educated in the regular education classroom for at least a portion of their day. Educational communities distinguish themselves with a common purpose and specialized lexicon (Murphy & Alexander, 2000). In areas of research that influence typical and exceptional students such as noncognitive skills, each field has developed varied terms and definitions. As researchers focus on the importance of noncognitive skills, it is important to develop an educational community with a shared lexicon between researchers looking at typical and exceptional populations.

There is an increasing interest in noncognitive skills among researchers and teachers as they look for ways to close the achievement gap. The University of Chicago Consortium on Chicago School Research (CCCSR) published a report in 2012 entitled *Teaching Adolescents to Become Learners. The Role of Noncognitive Factors in Shaping School Performance: A Critical Literature Review* in which they drew together research from fields such as psychology, economics, and education to present noncognitive factors as a malleable means to improve student performance in school. In the first chapter of the report, Allensworth et al. wrote:

> Recent research on noncognitive factors has not only suggested their importance for student academic performance but has also been used to argue that social investments in the development of these noncognitive factors would yield high payoffs in improved educational outcomes as well as reduced racial/ethnic and gender disparities in school performance and educational attainment. (p. 5)

The CCCSR report established a conceptual framework and terminology to further the study of noncognitive skills. According to the framework derived by CCCSR, noncognitive factors include academic mindsets, academic perseverance, academic behaviors, learning strategies, and social skills, which interact to influence academic performance (Allensworth et al., 2012, p. 12). The purpose of this paper is to examine the terms used to define noncognitive factors in research with typical and exceptional students in an attempt to bring the diverse vocabulary together through the lens of the CCCSR framework.

Methods

Search. A search was conducted utilizing Academic Search Complete for the years 2012-2019. The terms "noncognitive skills," "non-academic skills," "social-emotional skills," "soft skills," and "postsecondary transition" were entered based on their presence in the CCCSR Report (2012) and their broad conceptual definition. "Postsecondary transition" was added to capture the literature related to the exceptional student population. Each result was evaluated for the

inclusion criteria by hand. The inclusion criteria were published in a peer reviewed academic journal after 2012, measured noncognitive factors, targeted students in high school, related to postsecondary outcomes, and written in English.

Coding. Articles that met the inclusion criteria were coded into Table 1. The population of students included in the research were coded either (T) for typically developing student or (Ex) for exceptional students. Exceptional students were defined as those students that are on an Individualized Education Plan to receive special education services. Articles were also coded based on the transition area the research targeted. Education is coded (Edu), employment (Emp), and independent living (Ind). The definitional clarity of the noncognitive terms used in the article were coding that followed the guidelines published in a review of motivational terms conducted by Murphy & Alexander (2000). Terms were either explicitly (E) or implicitly defined. If a term was implicitly defined, there were three forms: conceptual (I(C)), operational (I(O)), or referential (I(R)). Implicit conceptual indicated the author alluded to the meaning of the term but did not specifically define it. Implicit operational signified the author assessed the term with an instrument that illustrates the way in which the term was being defined. Lastly, implicit referential meant the author cited key researchers whose work defines the term in greater detail.

Framing Variables. The CCCSR Report (2012) is a critical literature review. It defines noncognitive factors as "a set of behaviors, skills, attitudes, and strategies that are crucial to academic performance" (Allensworth et al., 2012). The framework established by CCCSR illustrates the influence of five distinct areas on academic performance. "Academic Behaviors" are desirable student activities such as going to class, completing work, and studying. Secondly, "Academic Perseverance" includes the psychological concepts of grit, self-discipline, and delayed gratification. Third, "Academic Mindsets are the psycho-social attitudes or beliefs one has about oneself in relation to academic work." Fourth in the report is "Learning Strategies." This includes techniques the student uses to support thinking, learning, and remembering. Lastly, the area of "Social Skills" includes interpersonal qualities such as empathy, cooperation, and responsibility. This framework, and its research-based definitions, serve as the frame for the article analysis in Tables 2-7.

Summary of Reviewed Studies

Educational researchers used diverse language to describe the elements of noncognitive factors. Despite the narrowed inclusion criteria for this review, no fewer than 40 unique terms were explicitly or implicitly defined in the studies. Of the studies that focused on students with exceptionalities, 60% measured self-determination while researchers of typically developing students used terms encompassing all aspects of the CCCSR (2012) noncognitive factors framework.

Tables 1-6 show the operationalization of noncognitive terms in studies that involved typical and exceptional high school students. Columns 1 and 2 indicated the author and year for reference. Column 3 coded the student population as typical or exceptional. The remaining three columns were the primary focus of the literature review: term, clarity, and definition. The term was recorded as the author used it, without interpretation or attempting to reconcile it with the

CCCSR conceptual framework, which was done in the narratives. The definition is either a direct quote from the text, the authors references used, or the measurement tool administered.

Noncognitive Factors. The CCCSR report defines noncognitive factors as "a set of behaviors, skills, attitudes, and strategies that are crucial to academic performance" (Allensworth et al., 2012). In Table 1, the alternatives for the phrase "noncognitive factors" are shown.

Table 1

Noncognitive Factors

Author	Year	Students[a]	Term	Clarity[c]	Definition
Athayde & Chell	2011	T	soft-skills	I (C)	*"...creativity, self-efficacy, risk-taking, energy, and leadership" (p.619).*
Bolli & Hof	2018	T	noncognitive skills	I (R)	Referred to Borghans et al. (2008); Heckman & Kautz, 2013; Heckman, Pinto, & Savelyev, 2013.
Brougham & Kashubeck-West	2018	T	noncognitive factors	E	*"Although school counselors cannot rectify noncognitive factors such as family income and parent education level, they can work with students to develop the attitudes and skills endorsed by the American School Counselor Association in the standards established in 'Mindsets and Behaviors for Student Success: K-12 College-and-Career-Readiness Standards for Every Student'" (p. 2-4).*
Conley, Lombardi, & Seburn	2011	T	college readiness	I (C)	*"[D]evelopment of college readiness skills is facilitated by student awareness and planning around key areas such as cognitive strategies, content knowledge, contextual skills and awareness, and academic behaviors (Conley 2007, 2010)" (p.376).*
Durlak, Oberle, Taylor, & Weissberg	2017	T	positive youth development framework	E	*"...building young people's positive personal competencies, social skills, and attitudes (i.e., asset development) through increased positive relationships, social supports, and opportunities that strengthen assets and help youth flourish within their environments (i.e., environmental enhancement)" (p.1156).*
Durlak, Oberle, Taylor, & Weissberg	2017	T	social emotional learning	E	*"...involves implementing practices and policies that help students and adults acquires and apply knowledge, skills, and attitudes that enhance personal development, social relationships, ethical behaviors, and effective, productive work" (p.1157).*
Freeman, Harvey, Lombardi, & Rifenbark	2019	Both	noncognitive skills	E	*"Researchers often lump Grit with self-control, growth mind-set, and conscientiousness, all of which are referred to as 'noncognitive skills.'"*

Gower et al.	2014	T	social-emotional intelligence	I (O)	Measured using three scales from the Emotional Quotient Inventory: Youth Version.
Herd	2010	T	noncognitive psychological human capital	I (C)	*"[Education] develops broadly effective habits and attitudes such as dependability, judgement, motivation, effort, trust, and confidence…Education instills the habit of meeting problems with attention, thoughts, action, and perseverance…[characteristics some call] 'personality traits.'[T]he process of learning builds the confidence, motivation, and self-assurance needed to attempt to solve problems" (p.479).*
Herd	2010	T	personality and psychological human capital	I (O)	Measured through the Big Five Inventory and Ryff scale of psychological well-being
Hsin & Xie	2014	T	noncognitive skills	I (R)	Referred to Heckman & Rubenstein, 2001; Carneiro & Heckman, 2003; Cunha, Heckman, Lochner, & Masterov, 2006.
Kaprolet & Sullivan	2013	Ex	college-readiness skills	I (C)	*"Several college-readiness skills, including self-advocacy, skills helping develop social supports, and personal responsibility, are fundamentally social-emotional (Babbitt & White, 2002)" (p. 161).*
Kaprolet & Sullivan	2013	Ex	social-emotional skills	I (R)	*"The skills selected for this study were chosen based on their similarity to the broad taxonomy of social-emotional skills-peer relations, self-management, compliance, assertion, and academic skills—developed by Caldarella and Merrell (1996) in their review of 21 social skills studies and program manuals" (p. 162).*
McGee	2011	Ex	noncognitive skills	I (O)	*Measured using Behavior Problems Index, the Pearlin Mastery Scale, and Rosenberg Self-Esteem Scale*
Wood-Groves	2015	T	21st century skills	I (C)	*"Within the United States, the term '21st century skills' or 'college readiness skills' has been employed to describe a collection of core readiness competences that have been delineated as influential in children and adolescents' future education, vocational, and interpersonal success (Peterson & Seligman, 2004; Lai & Viering, 2012; National Research Council, 2012)" (p.770).*
Wood-Groves	2015	T	common core standards	I (C)	*"The Common Core Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2012) were designed to incorporate the developmental and generalization of persistence, curiosity, affective (e.g., interpersonal skills), and cognitive (e.g., critical thinking, problem solving) behaviors in K-12th grade students" (p. 771).*

Notes [a](T) Typical; (Ex) Exceptional
[c](E) Explicit; (I(C)) Implicit Conceptual; (I(O)) Implicit Operational; (I(R)) Implicit Reference

There was little consistency, even within an article, when the author attempted to capture noncognitive factors in a single phrase. Kaprolet & Sullivan (2013) used "social emotional skills" as the broad taxonomy to guide their variable selection while making the case that "college readiness skills" were "fundamentally social emotional." With at least nine phrases appearing in the scope of this review, using the CCCSR term would provide researchers with a common starting point to guide discussions.

Academic Behaviors. "Academic behaviors are the visible, outward signs that a student is engaged and putting forth effort to learn" (Allensworth et al., 2012, p. 8). Table 2 was complied with this explicit definition in mind.

Table 2
Academic Behaviors

Author	Year	Term	Clarity[c]	Definition
Brougham & Kashubeck-West	2018	academic performance	E	*"Academic performance was operationalized as GPA for four core subjects: mathematics, science, communication arts, and social studies…" (p.5).*
Conley, Lombardi, & Seburn	2011	key cognitive strategies	E	*"Key cognitive strategies refer to the intentional behaviors that enable students to learn, understand, retain, use, and apply content from a range of disciplines, and include the ability to make inferences, interpret results, analyze conflicting source documents, support arguments with evidence, solve complex problems that have no obvious answer, reach conclusions, offer explanations, conduct research, engage in the give-and-take of ideas, and generally think deeply about what they are being taught" (p. 377).*
Conley, Lombardi, & Seburn	2011	key cognitive strategies	I (R)	Referred to Conley, 2003, 2005; National Research Council, 2002.
Conley, Lombardi, & Seburn	2011	academic behaviors	E	*"[A]cademic behaviors are self-management skills, attitudes, and habits necessary for students to meet the challenges of college workload and rigor…Examples include the ability to self-monitor, manage time, take notes, set goals, persevere in the face of obstacles, collaborate, self-evaluate, and self-advocate" (p. 377).*
Conley, Lombardi, & Seburn	2011	academic behaviors	I (R)	Referred to Bransford, Brown, & Cocking, 2000; Conley, 2007.

Conley, Lombardi, & Seburn	2011	academic behaviors	I (O)	An exploratory factor analysis during the development of the College & Career Ready School Diagnostic created four factors: "Goal-Driven Behaviors," "Persistence," "Study Skills," "Self-Monitoring" which were confirmed in a cross validation study.
Hsin & Xie	2014	attentiveness	I (R)	Referred to Duckworth & Seligman, 2005; Dweck, 1986; Moffitt et al. (2011).
Hsin & Xie	2014	academic effort	I (C)	*"[M]ath and reading teachers were asked two questions aimed at capturing students' work habits and motivation. The first item asked teachers to rate students in terms of their attentiveness…The second asked teachers whether they agreed or disagreed that the student works hard for his/ her grades" (p. 8417).*
Lapan, Marcotte, & Poynton	2015	academic-related skills	E	*" Spending more time working on high school assignments, earning good grades, and taking demanding courses that hold students to high academic standards are academic-related skills necessary for postsecondary success (American College Testing, 2007)" (p. 59).*
Wood-Groves	2015	cognition	I (R)	*"The construct of cognition was defined by Eaves (1993, 2002) as critical thinking behaviors that require symbolic representation, problem solving, and language-based skills" (p.772).*

Notes [a](T) Typical; (Ex) Exceptional
[c](E) Explicit; (I(C)) Implicit Conceptual; (I(O)) Implicit Operational; (I(R)) Implicit Reference

Despite being visible, and thus more easily measured, very few included studies attempted to measure in this area. In Hsin & Xie (2014), the researchers measured "academic effort" by asking teachers "whether they agreed or disagreed that the student works hard for his/her grades." Since the teacher is rating a student based on their visible academic behaviors and effort, rather than intrinsic factors, it was placed with this component.

Academic Perseverance. Academic perseverance referred to a student's tendency to complete assignments on time and to the best of their ability despite distractions (Allensworth et al., 2012). The expressions in the reviewed studies that fit this concept are displayed in Table 3.

Table 3
Academic Perseverance

Author	Year	Students[a]	Term	Clarity[c]	Definition
Athayde & Chell	2011	T	energy	E	*"Pursuit of an idea—some might say a dream—requires energy. To be an effective innovative entrepreneur requires persistence, proactivity and drive" (p. 617).*

Conley, Lombardi, & Seburn	2011	T	persistence	E	*"'Persistence' relates to help-seeking and time management behaviors" (p. 380).*
Conley, Lombardi, & Seburn	2011	T	self-regulation	I (O)	Referenced measures of self-regulation such as Motivated Strategies for Learning Questionnaire (MLSQ; Pintrich, Smith, Gacia, & McKeachie, 1991) and Patterns of Adaptive Learning (PALS; Midgley et al., 2000).
Conley, Lombardi, & Seburn	2011	T	self-monitoring	E	*"'Self-Monitoring' relates to self-awareness of effective strategies, resources, and ways to improve" (p.380).*
Conley, Lombardi, & Seburn	2011	T	behavioral engagement	I (R)	Referred to Fredricks et al. (2004) and persistence being a component of the definition.
Durlak, Oberle, Taylor, & Weissberg	2017	T	self-awareness	E	*"…recognizing emotions, strengths, and limitations and values…" (p.1157).*
Durlak, Oberle, Taylor, & Weissberg	2017	T	self-management	E	*"…regulating emotions and behaviors…" (p.1157).*
Freeman, Harvey, Lombardi, & Rifenbark	2019	Both	grit	E	*"Defined as the combination of perseverance and passion for long-term goals…" (p.67).*
Giani	2015	T	persistence	E	*"persistence is defined as maintaining continuous enrollment at any 4-year institution through the summer of 2006 (2 years after high school graduation)" (p. 111).*
Gower et al.	2014	T	intrapersonal skills	I (O)	*"Intrapersonal skills (6 items) assessed participants' abilities to recognize, express, and regulate indicated better skills" (p. 68).*
Hsin & Xie	2014	T	self-control	I (R)	Referred to Duckworth & Seligman, 2005; Dweck, 1986; Moffitt et al. (2011).
Hsin & Xie	2014	T	persistence	I (R)	Referred to Duckworth & Seligman, 2005; Dweck, 1986; Moffitt et al. (2011).
Kaprolet & Sullivan	2013	Ex	self-management	E	*"Skills that allow a youth to control his or her temper, respect-imposed limits, and compromise" (p. 165).*
Ke, Shute, & Ventura	2014	T	persistence	E	*" Persistence…is a facet of conscientiousness that reflects a*

					dispositional need to complete difficult tasks (McClelland, 1961) and the desire to exhibit high standards or performance in the face of frustration (Dudley, Orvis, Lebiecki, & Cortina, 2006)" (p. 60).
Lapan, Marcotte, & Poynton,	2015	T	academic discipline	I ®	Referenced Robbins, Allen Casillas, Peterson, & Le (2006).
Schreiber	2012	T	self-regulation	E	*"…inhibition, shift, emotional control, self-monitor" (p. 1508).*
Wood-Groves	2015	T	persistence	I (R)	*"Eaves, in accordance with other theorists, defined persistence behaviors as continued, undeterred, and sustained action invested to achieve a goal or directive even in the face of adversity (Lindsley, 1958; Eaves, 1993, 2002; Peterson & Seligman, 2004; Woods-Groves et al., 2011)" (p. 771).*

Notes [a](T) Typical; (Ex) Exceptional
[c](E) Explicit; (I(C)) Implicit Conceptual; (I(O)) Implicit Operational; (I(R)) Implicit Reference

The most conceptually difficult term to place was "interpersonal skills" (Gower et al., 2014) which they implicitly defined through the use of the Emotional Quotient Inventory as "participants' abilities to recognize, express, and regulate indicated better skills" (p. 68). The study highlights the importance of social emotional intelligence for adolescent girls and the inclusion of aspects of self-control and self-discipline led to its placement in academic perseverance. Overall, six terms were used to describe aspects of academic perseverance which, when added to the examples from the CCCSR report leads to ten unique ways to express academic perseverance.

Academic Mindsets. According to Allensworth et al. (2012), academic mindsets are the beliefs and attitudes a student has about themselves in relation to academic work. In Table 4, the variety of terms that fit the construct of academic mindset, based on their provided implicit and explicit definitions, are shown.

Table 4
Academic Mindsets

Author	Year	Students[a]	Term	Clarity[c]	Definition
Athayde & Chell	2011	T	self-efficacy	E	*"According to Bandura, self-efficacy—the feelings of empowerment, self-confidence, and self-assurance—is developed through a process of social learning" (p.617).*

Bolli & Hof	2018	T	coping	E	*"...three coping styles: problem-centered (focused) coping with attempts to regulate the situation, emotion-centered coping with attempts to regulate the emotion, and avoidance-centered coping which aims at avoiding the stressful situation"(p. 47).*
Brougham & Kashubeck-West	2018	T	mindset	E	*"People with a growth mindset subscribe to an incremental theory, believe they can increase their knowledge and ability, and are intrinsically motivated. People with a fixed mindset subscribe to an entity theory, believe that intellectual abilities are permanent and unchangeable, and are extrinsically motivated, performing an activity for a grade or other external reward rather than mastery."*
Durlak, Oberle, Taylor, & Weissberg	2017	T	self-awareness	E	*"...recognizing emotions, strengths, and limitations and values..." (p.1157).*
Gower et al.	2014	T	stress management skills	I (O)	*"Stress management skills (8 items) assessed participants' abilities to cope positively with stress and control their emotions" (p. 68).*
Hsin & Xie	2014	T	motivational processes	I (R)	Referred to Duckworth & Seligman, 2005; Dweck, 1986; Moffitt et al. (2011).
Lapan, Marcotte, & Poynton,	2015	T	motivational factors	E	*"Motivational factors such as achievement motivation, connectedness, a sense of personal belonging in school, interpersonal relationships and skills, and perceptions of safety are strongly linked to critical markers of student postsecondary success" (p. 59).*
Madaus & Newman	2015	Ex	psychological empowerment	E	*"Psychological empowerment refers to a combination of attitudes and abilities leading individuals to believe they have the ability to achieve desired outcomes" (p. 212).*
Madaus & Newman	2015	Ex	self-realization	E	*"As defined by Wehmeyer (2003), self-realization is having an understanding of one's strengths and limitations" (p. 212).*

Notes [a]*(T) Typical; (Ex) Exceptional*
[c]*(E) Explicit; (I(C)) Implicit Conceptual; (I(O)) Implicit Operational; (I(R)) Implicit Reference*

Motivational factors are explicitly absent from the CCCSR framework, but based on the articles definitions they seemed to fit best within academic mindset. Poynton et al. (2015) explicitly defined it as "achievement motivation, connectedness, a sense of personal belonging in school, interpersonal relationships and skills, and perceptions of safety are strongly linked to critical markers of student postsecondary success" (p. 59). The inclusion of connectedness and sense of belonging correlated to the example provided for academic mindset, “I belong to this academic community.”

Learning Strategies. The final components of noncognitive factors are learning strategies. Allensworth et al. (2012) describe them as “processes and tactics one employs to aid in the cognitive work of thinking, remembering, or learning” (p. 10). This element of the CCCSR framework was exhibited frequently and by a diverse field of terms as shown in Table 5.

Table 5

Learning Strategies

Author	Year	Term	Clarity[c]	Definition
Athayde & Chell	2011	creative thinking	E	*"Imagination, understanding and the ability to develop the idea are fundamental to getting started. Consciously or not, disparate ideas need to be connected; an understanding of the direction of development is also required. This process is that of creative thinking" (p. 617).*
Banks	2013	self-determination	I (C)	*"Without specific instruction in self-determination, he exhibited the key component skills of choice and decision making, self-advocacy, problem-solving, and goal attainment" (p.33).*
Chen, Cifu, Wehman, & West	2014	self-determination	I (C)	*"Those who were either moderately active participants or were leaders of their own transition planning had high levels of post-school employment…these findings provide evidence in support of the value of self-determination" (p. 370).*
Conley, Lombardi, & Seburn	2011	goal-driven behaviors	E	*"'Goal Driven Behaviors' relates to setting and accomplishing goals…These items include not only the perceived importance of setting goals but also the necessary steps in accomplishing those goals" (p. 380).*
Conley, Lombardi, & Seburn	2011	study skills	E	*"'Study Skills' relates to group work with peers, and test- and note-taking strategies" (p.380).*
Conley, Lombardi, & Seburn	2011	cognitive engagement	I (R)	Referred to Fredricks et al. (2004) and self-monitoring, study skills, and goal-driven behaviors being a facets of the definition.

Geenen et al.	2015	self-determination	I (O)	Use of the ARC Self-Determination Scale and AIR Self-Determination Scale.
Holzberg, Rusher, & Test	2019	self-advocacy	E	*"...the individuals ability to effectively recognize and articulate one's needs and rights" (p. 167).*
Ke, Shute, & Ventura	2014	problem solving	E	*"Problem solving consists of four relatively independent skills: (1) rule application (solving problems by applying existing rules), (2) problem decomposition (determining the goals, sub-goals, and individual steps of the problem), (3) flexibility (i.e., using tools in novel ways), and (4) resource management (i.e., effective and efficient allocation of resources)" (p. 60).*
Ke, Shute, & Ventura	2014	creative thought	I (O)	Measured using the remote association test (Mednick, 1962).
Madaus & Newman	2015	self-determination	E	*"Self-determination involves several component elements, including but not limited to decision making, self-awareness, and self-knowledge (Wehmeyer, 1995)" (p.208).*
Schreiber	2012	executive function	I (O)	Measured using the Behavior Rating Inventory of Executive Function which divides domains between self-regulation (inhibition, shift, emotional control, self-monitor) and metacognition (initiate, working memory, plan/organize, task monitor, organization of materials) (p. 1508).
Schreiber	2012	metacognition	E	*"...initiate, working memory, plan/organize, task monitor, organization of materials" (p. 1508).*
Wood-Groves	2015	curiosity	I (R)	*"Eaves (1993, 2002) defined curiosity as novelty-seeking behaviors, exploration behaviors, and a sustained interest in continuous learning or investigating stimuli" (p.771).*

Notes [a](T) Typical; (Ex) Exceptional
[c](E) Explicit; (I(C)) Implicit Conceptual; (I(O)) Implicit Operational; (I(R)) Implicit Reference

At first, it was difficult to distinguish academic behaviors and learning strategies; but, as noted in the CCCSR report, academic behaviors are outwardly visible and learning strategies are the internal processes. These two areas get the most attention from educators as they directly relate to content instruction; but, as educational researchers begin to clarify the lexicon and increasingly infuse noncognitive factors into teacher training, the other elements of the framework may begin to appear in interventions to influence academic performance.

Social Skills. Social skills are a popular topic in primary education as well as vocational fields. Allensworth et al. (2012) described social skills as "acceptable behaviors that improve social interactions" with students and teachers. As shown in Table 6, social skills are referred to using seven distinctive phrases.

Table 6

Social Skills

Author	Year	Term	Clarity[c]	Definition
Athayde & Chell	2011	leadership	E	*"...to be able to convince others of its worth; marshal arguments for its further development; and indeed see off rivals" (p.617).*
Durlak, Oberle, Taylor, & Weissberg	2017	social awareness	E	*"...taking the perspective of and empathizing with others from diverse backgrounds and cultures…" (p. 1157).*
Durlak, Oberle, Taylor, & Weissberg	2017	relationship skills	E	*"...establishing and maintaining healthy relationships…" (p. 1157).*
Kaprolet & Sullivan	2013	social skills	I (C)	*"Within the school environment, social skills are those that allow individuals to adequately engage in social tasks (Gresham, 2002)" (p.161).*
Kaprolet & Sullivan	2013	peer relations	E	*"...skills that lead to positive interactions with peers" (p. 165).*
Kaprolet & Sullivan	2013	compliance	E	*"...skills relating to following social rules and expectations" (p. 165).*
Kaprolet & Sullivan	2013	assertion	E	*"...skills that allow students to initiate conversations, invite others to play or work, and self-confidence" (p. 165).*
Madaus & Newman	2015	personal autonomy	E	*"Behavior is considered to be autonomous if a person acts independently, according to his or her own preferences, interests, and abilities without undue external influence or interference" (p.212).*
Wood-Groves	2015	externalizing behaviors	I (R)	*"Eaves defined externalizing behaviors as maladaptive behaviors such as disobeying rules or directives, destroying property, aggressive actions towards one's self or others, and bullying behaviors..." (p. 771).*
Wood-Groves	2015	internalizing behaviors	I (R)	*"...whereas internalizing behaviors were delineated as behaviors that depict anxiety, fear, and shyness" (P. 771-772).*

[c]*(E) Explicit; (I(C)) Implicit Conceptual; (I(O)) Implicit Operational; (I(R)) Implicit Reference*

Typically, internalizing behaviors align with other aspects of noncognitive factors; but, Wood-Groves (2015) wrote, "... internalizing behaviors were delineated as behaviors that depict anxiety, fear, and shyness" (p. 771-772). The inclusion of “behaviors that depict” implies outwardly observable behaviors such as body language, which are aspects of social skills. The literature on social skills is well defined as evidenced by the clarity within the lexicon, but it occurs less frequently in this review, in part because it has developed as a field separate from noncognitive research.

Conclusions and Implications

Noncognitive skills may provide a way to bridge the achievement gap for students with learning disabilities. A student's academic mindset, behavior, and perseverance are all ways a student influences their academic performance apart from their learning difficulties. Noncognitive factors may be a means for educators to improve all students' performance once researchers come to a consensus about how to conceptualize and assess these skills across fields. Advancements in assessment cannot be made without clear operationalized definitions of terms, which are agreed upon by the field at large. Without validated assessments, it is difficult for researchers to track the malleability of skills and the influence of specific interventions. The work for Allensworth et al. (2012) provides a synthesis of multiple fields of research and should be adopted as a way to bring typical and exceptional student researchers together.

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