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Taking Skills Seriously: Toward an Integrative Model and Agenda for Social, Emotional, and Behavioral Skills

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Abstract

Success in life is influenced by more than cognitive ability and opportunity. Success is also influenced by social, emotional, and behavioral (SEB) skills: a person's capacities to maintain social relationships, regulate emotions, and manage goal- and learning-directed behaviors. In this article, we propose an integrative model that defines SEB skills as capacities (what someone is capable of doing) rather than personality traits (what someone tends to do) and identifies five major skill domains: social engagement, cooperation, self-management, emotional resilience, and innovation. We then argue that operational measures of SEB skills should reflect rather than obscure the distinction between skills and traits. Finally, we propose an agenda for future work by highlighting open questions and hypotheses about the assessment, development, and outcomes of SEB skills as well as interventions and public policy targeting these skills.

Keywords

noncognitive skills, social and emotional learning, personality traits, psychological assessment, life-span development

Picture a serious high school student who is typically quiet and introverted. Her biology class has a group project due next week. Her team disagrees on a few issues. They begin arguing. Instead of remaining quiet, she asserts herself, leading the team toward a solution and, later, a good grade. Leaving class, she wonders, "How was I able to do that? I'm usually so shy!"

Across the fields of developmental, social, and personality psychology, as well as economics, education, and sociology, a rapidly growing scientific literature shows that success in life is influenced by more than intelligence and opportunity. Success is also influenced by people's capacities to maintain *social* relationships, regulate *emotions*, and manage goal- and learning-directed *behaviors*—personal qualities that can be distinguished from cognitive ability as measured by intelligence tests (Duckworth & Yeager, 2015). We refer to these capacities as social, emotional, and behavioral (SEB) skills. On the one hand, the burgeoning SEB-skills literature is exciting in that it suggests avenues for promoting positive outcomes for school, work, social relationships, health, and well-being (Bleidorn et al., 2019; Kautz et al., 2014; Nagaoka et al., 2015; Organisation for Economic Co-operation and Development [OECD], 2015). On the other hand, this multidisciplinary literature is populated by a confusing array of terms, definitions, and taxonomies (e.g., 21st-century competencies, character strengths, noncognitive skills, personality traits, social and emotional learning, soft skills; Abrahams et al., 2019; Duckworth & Yeager, 2015).

Given the burgeoning but fragmented state of this literature, our overarching goal for this article is to propose an integrative model of SEB skills that is based in our research traditions as personality and developmental psychologists but can be useful for researchers and practitioners of any discipline. To support this model, we will argue for three key points. First, many

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SEB skills can be organized within a taxonomy of five major skill domains. Second, skills can be conceptually distinguished from personality traits. Third, operational measures should clearly reflect the distinction between skills and traits. These proposals suggest an agenda for future work on SEB skills by highlighting open questions and hypotheses about assessment, development, outcomes, interventions, and public policy.

Point 1: We Should and Can Agree on a Taxonomy of SEB Skills

What are the most important SEB skills, and how do they relate with each other? Increased recognition that skills affect life outcomes has motivated efforts to identify important skills and to situate them within a structural model or taxonomy. These efforts have been led by the social and emotional learning (SEL), economics, and psychology research communities. However, different scholars have relied on different conceptual and empirical bases and therefore arrived at many different taxonomies, which reflects the difficulty of this task. In fact, a recent report identified 136 skill and competency frameworks (Berg et al., 2017; for an interactive database, see http://exploresel.gse.harvard.edu). In Figure 1, we list several prominent models.

The taxonomies shown in Figure 1 differ from each other in the number of major domains included as well as the labels given to these domains. However, a closer look reveals key points of convergence. First, each taxonomy includes three to five domains, suggesting bounds for the number of broad dimensions needed to construct a model of SEB skills that is reasonably comprehensive while remaining palatable to practitioners.

Second, although each taxonomy labels its domains differently, the domains' content is often similar (but not identical) across taxonomies. For example, both a conceptual review of knowledge and skill constructs by a panel of psychology and education researchers (National Research Council, 2012) and an empirically derived taxonomy of character strengths (Park et al., 2017) include three major categories representing interpersonal, intrapersonal, and intellectual skills. Two prominent five-dimensional taxonomies (Collaborative for Academic, Social, and Emotional Learning, 2020; Lerner et al., 2005) subdivide the interpersonal category into two domains: one focused on active, agentic social engagement and one focused on maintaining harmonious, communal relationships. Both of these models also subdivide the intrapersonal category into two domains: one focused on pursuing goals and completing tasks and one focused on accurately recognizing and regulating self-related emotions, attitudes, and beliefs.

As shown in the bottom row of Figure 1, the points of overlap shared across taxonomies strikingly parallel the Big Five personality traits: extraversion, agreeableness, conscientiousness, emotional stability (vs. neuroticism), and openness to experience (John et al., 2008). As recently noted by a number of scholars, this convergence suggests that SEB skills—like other kinds of personal characteristics—can be effectively organized within major domains that resemble the Big Five in terms of their behavioral referents (Abrahams et al., 2019; Casillas et al., 2015; Kautz et al., 2014; National Research Council, 2012; OECD, 2015). Thus, the Big Five provide a descriptive foundation for building an integrative model of SEB skills.

Point 2: SEB Skills Are Not Personality Traits

If SEB skills can be organized within major domains resembling the Big Five, does this imply that skills are equivalent to personality traits? Our position is that they are not. Some economists and psychologists (Kautz et al., 2014; OECD, 2015) have proposed that personality traits are indeed skills, but other scholars have distinguished skills from traits (Duckworth & Yeager, 2015; National Research Council, 2012). We argue that it is possible—and important—to draw a clear conceptual distinction between skills and traits.

How do traits and skills differ? Personality traits are characteristic patterns of thinking, feeling, and behaving that are consistent over time and across relevant situations. They therefore represent cognitive, affective, and behavioral tendencies: what a particular person tends to do, averaged across situations. In contrast, skills are capacities: what a person is capable of doing when the situation calls for it (Paulhus & Martin, 1987; Wallace, 1966). Rather than reflecting a person's default pattern of behavior, SEB skills represent the tools available in their psychological toolbox, which they can selectively bring out or put away as needed.

Many behaviors can be conceptualized as either a trait-like or a skill-like characteristic, and these characteristics may reciprocally influence each other (Casillas et al., 2015; Dweck, 2017). Therefore, skills and traits should often relate positively. Someone who is good at performing a particular behavior (high skill) is more likely to enact that behavior, eventually forming a characteristic tendency (high trait). Similarly, someone who habitually performs a behavior (high trait) because of intrinsic motivation or recurring situational demands is likely to become better at performing it (high skill). However, this positive relation does not always hold. For example, the vignette at the beginning of this article

<table>
<tr><th>Taxonomy</th><th>Agentic Interpersonal Domains</th><th>Communal Interpersonal Domains</th><th>Goal-Focused Intrapersonal Domains</th><th>Emotion-Focused Intrapersonal Domains</th><th>Intellectual Domains</th></tr>
<tr><td>21st-Century Competencies (National Research Council, 2012)</td><td colspan="2">Interpersonal Competencies</td><td colspan="2">Intrapersonal Competencies</td><td>Cognitive Competencies</td></tr>
<tr><td>Tripartite Taxonomy of Character (Park et al., 2017)</td><td colspan="2">Interpersonal Strengths</td><td colspan="2">Intrapersonal Strengths</td><td>Intellectual Strengths</td></tr>
<tr><td rowspan="2">Five Cs of Positive Youth Development (Lerner et al., 2005)</td><td rowspan="2">Connection</td><td>Caring</td><td>Competence</td><td rowspan="2">Confidence</td><td rowspan="2"></td></tr>
<tr><td colspan="2">Character</td></tr>
<tr><td rowspan="2">CASEL Core Competencies (CASEL, 2020)</td><td rowspan="2">Relationship Skills</td><td>Social Awareness</td><td>Self-Management</td><td rowspan="2">Self-Awareness</td><td rowspan="2"></td></tr>
<tr><td colspan="2">Responsible Decision-Making</td></tr>
<tr><td>Big Five Personality Traits (John et al., 2008)</td><td>Extraversion</td><td>Agreeableness</td><td>Conscientiousness</td><td>Emotional Stability</td><td>Openness to Experience</td></tr>
</table>

Fig. 1. Prominent taxonomies of skills, competencies, and personality traits, along with the domains each model includes. CASEL = Collaborative for Academic, Social, and Emotional Learning.

Table 1. An Integrative Model of Social, Emotional, and Behavioral Skills

Skill domain	Corresponding personality trait	Definition	Examples of prototypical skills	Additional examples of relevant skills
Social engagement	Extraversion	Capacities used to actively engage with other people	• Leadership skill: capacity to assert one's views and speak in a group • Conversational skill: capacity to initiate and maintain social interactions	• Persuasive skill • Expressive skill • Energy regulation
Cooperation	Agreeableness	Capacities used to maintain positive social relationships	• Perspective-taking skill: capacity to understand other people's thoughts and feelings • Capacity for social warmth: capacity to evoke positive social responses from other people	• Capacity for trust • Teamwork skill • Ethical competence
Self-management	Conscientiousness	Capacities used to effectively pursue goals and complete tasks	• Goal regulation: capacity to set clear and ambitious goals • Task management: capacity to work persistently to complete tasks and achieve goals	• Time management • Organizational skill • Detail management • Responsibility management • Capacity for consistency • Rule-following skill • Decision-making skill • Capacity for independence
Emotional resilience	(Low) neuroticism	Capacities used to regulate emotions and moods	• Stress regulation: capacity to regulate stress, anxiety, and fear • Anger management: capacity to regulate anger and irritation	• Capacity for optimism • Confidence regulation • Impulse regulation • Adaptability
Innovation	Openness to experience	Capacities used to engage with novel ideas and experiences	• Abstract-thinking skill: capacity to engage with abstract ideas • Artistic skill: capacity to create and appreciate art	• Creative skill • Information-processing skill • Cultural competence • Self-reflection skill

describes a student who is usually shy and introverted (low trait) but can act as a leader when needed (high skill). Conversely, someone may frequently enact a behavior (high trait) because they enjoy it, even though they are not very good at performing it (low skill).

To reflect these relations and distinctions between skills and traits, an integrative model should organize SEB skills within five major domains that correspond to the Big Five traits but define each domain as a set of functionally related capacities rather than cross-situationally consistent tendencies. Such a model is proposed in Table 1, in which the five domains are defined as follows:

- *Social-engagement skills*: capacities used to actively engage with other people
- *Cooperation skills*: capacities used to maintain positive social relationships
- *Self-management skills*: capacities used to effectively pursue goals and complete tasks
- *Emotional-resilience skills*: capacities used to regulate emotions and moods
- *Innovation skills*: capacities used to engage with novel ideas and experiences

To further elaborate this model, we list and define some specific skills within each domain in Table 1. These examples are neither exhaustive nor strict: Additional skills can be identified within each domain, and some skills blend aspects of multiple domains. For example, the impulse-regulation skill involves aspects of both the emotional-resilience (inhibiting emotional impulses) and self-management (controlling behavioral habits) domains. Even after we acknowledge these complexities, Table 1 illustrates how prominent SEB-skill

domains identified by previous taxonomies can be integrated within a single model.

Point 3: Measures of SEB Skills Should Operationalize Skills as Capacities

How can researchers and practitioners operationalize this model? Many measures of SEB skills use the format of a standard personality inventory, in which test items are descriptive adjectives, phrases, or statements and respondents rate how well each item describes their typical pattern of behavior (e.g., Park et al., 2017; Primi et al., 2016). However, this focus on typical behavior obscures the distinction between skills and traits.

Alternative inventory approaches may better capture this distinction. For example, our research on the Behavioral, Emotional, and Social Skills Inventory (BESSI) uses a format in which each item represents a social, emotional, or behavioral skill (e.g., "Get started on tasks," "Calm down when I'm feeling anxious," "Start a conversation") and prompts the respondent to rate how well they (or a target individual) can perform the skill (Napolitano et al., 2020). Classic and contemporary psychometric research has shown the promise of capacity-oriented inventories (Davidson et al., 2018; Paulhus & Martin, 1987). Building on this work, our findings across seven independent samples of adolescents and adults indicate that BESSI self-reports and observer reports reliably assess specific skills and broader domains, with high internal consistency and retest reliability, as well as a robust hierarchical factor structure that parallels the framework shown in Table 1. It therefore offers researchers and practitioners a comprehensive and flexible tool for assessing SEB skills.

Of course, inventories are not the only option. Athletic and academic skills are often assessed using performance measures that place individuals in standardized situations designed to elicit specific capacities, such as how quickly they can run a 40-yard dash or how many problems they can solve during an examination period. Extending this approach to SEB skills, researchers have developed performance measures of some capacities, such as creativity and emotional intelligence (Torrance, 1966). Moreover, as a compromise between inventory and performance measures, situational judgment tests (SJTs) present hypothetical scenarios calling for particular skills and then grade the effectiveness of individuals' selected responses. For example, the Situational Test of Emotion Management assesses individuals' capacity to regulate emotions according to their responses to a set of scenarios involving specific emotions (MacCann & Roberts, 2008). It may be possible to develop performance measures or SJTs assessing many of the SEB skills shown in Table 1.

An Agenda for Future Work Testing Hypotheses About SEB Skills

The points discussed above suggest an agenda for future work examining the outcomes, assessment, and life-span development of SEB skills as well as interventions and policies designed to promote skill development. A recurring theme of this agenda is that previous research on personality traits and socioemotional learning can inform hypotheses about SEB skills but that many such hypotheses have yet to be directly tested.

How distinct are SEB skills from personality traits and intelligence?

As noted above, someone's capacity to perform a behavior (skill level) likely relates with their tendency to perform that behavior (trait level). Moreover, some SEB skills, especially in the innovation skills domain, may relate with cognitive ability. For example, someone's capacity to engage with a new idea relies on their ability to cognitively process that idea. However, the strength of relations among skills, traits, and intelligence remains unclear. We hypothesize that many SEB skills will relate moderately with personality traits and measured intelligence but remain distinct enough to capture unique information.

How are SEB skills best measured?

Inventory measures, performance measures, and SJTs all hold promise for assessing SEB skills. However, it is not yet clear which approach, or combination of approaches, will prove most reliable, valid, and practical. Research using inventory measures suggests that people can provide meaningful self-reports about their behavior, that observer reports can be especially valuable for situations and developmental periods (e.g., childhood) when self-reports are less accurate, but also that inventory reports can be undermined by evaluative bias that pulls ratings of conceptually distinct skills toward a general good-versus-bad factor (Paulhus & Martin, 1987; Vazire & Carlson, 2011). Performance measures and SJTs are less prone to evaluative bias but face other challenges. For example, performance measures designed to measure a particular capacity often have relatively low retest reliability and may fail to converge with one another (Eisenberg et al., 2019; Enkavi et al., 2019). Conversely, SJTs designed to measure different capacities often intercorrelate with each other and measured intelligence, making it difficult to isolate specific skills and establish discriminant validity. Additional work is needed to clarify the trade-offs between these measurement

approaches and thereby guide researchers' and practitioners' assessment decisions.

How powerfully do SEB skills predict life outcomes?

Previous research has shown that personality traits reliably predict many life outcomes, even after controlling for intelligence and demographic characteristics (Roberts et al., 2007; Soto, 2021). However, it is not yet known how defining and measuring SEB skills as capacities rather than traits affects their predictive power. Because the capacity to selectively regulate one's thoughts, feelings, and behaviors in response to situational demands seems crucial for finding success in life, we hypothesize that SEB skills may be even more powerful predictors of positive outcomes than are personality traits. Supporting this hypothesis, research on workers' typical performance (averaged over time) compared with maximal performance (assessed in standardized, high-effort situations) has found that maximal performance is the stronger predictor of some occupational outcomes (Sackett et al., 1988). Similarly, maximal-performance measures of some personality characteristics, such as social dominance and emotional expressiveness, have been found to out-predict typical-performance measures (Turner, 1978). However, future research using capacity-focused measures is needed to further test this hypothesis across a broader range of SEB skills and outcomes.

How do SEB skills develop across the life span?

Previous research has shown that personality traits are stable over short time periods but can gradually change across years or decades (Roberts & DelVecchio, 2000). We believe that SEB skills are also characterized by plasticity across the life span. Additional research that complements and extends literature reviews of skill development from childhood to young adulthood (Nagaoka et al., 2015) is needed to directly examine the development of SEB skills across the full life span. We hypothesize that (a) in general, SEB skills are moderately stable over time but (b) most skills gradually increase with age because of accumulated knowledge and practice in relevant contexts (e.g., practice enacting self-management skills at school and work), (c) some of these positive trends may be temporarily disrupted by the biosocial changes accompanying adolescence (Soto & Tackett, 2015), and (d) social roles and life circumstances that call for frequent enactment of a particular skill or targeted, contextually embedded interventions may accelerate the rate of change.

Are some SEB skills especially important during particular developmental periods?

People enact their SEB skills to further their goals, and these goals are often "age-graded," in that different goals tend to be most salient during different developmental periods (Freund et al., 2019). For example, young adults normatively search for friends and a romantic partner, middle-aged adults work to maintain existing relationships, and older adults cope with the deaths of spouses and friends. This suggests that some SEB skills may be especially important during particular developmental periods. For example, social-engagement skills may be more important in adolescence and early adulthood than in later periods. However, some skills may remain crucial throughout the life span. For example, it is difficult to imagine circumstances in which the capacity to regulate emotions would be unimportant. Thus, research is needed to test the developmental specificity or generality of SEB skills' adaptiveness.

How can interventions and public policy increase SEB skills?

If SEB skills predict important life outcomes and also change over time, then improving skills through effective interventions and policies could promote positive outcomes for many people. Moreover, targeted interventions could help balance the opportunities for skill development afforded to members of different socioeconomic and ethno-cultural groups. The available evidence on personality and skills interventions suggests that such initiatives can indeed produce changes in behavioral characteristics and subsequent improvements in educational, economic, and social outcomes (Bleidorn et al., 2019; Durlak et al., 2011; Kautz et al., 2014). For example, one randomized controlled trial showed that an 8-week intervention focused on training emotional-resilience skills substantially decreased distress levels in young adults (Galante et al., 2018). However, most such intervention research has examined changes in broad outcomes (e.g., academic performance, conduct problems) rather than directly assessing changes in the underlying SEB skills (Ura et al., 2020).

It is therefore unclear precisely how amenable SEB skills are to intervention and what strategies are most effective for increasing them. Drawing from research on academic and athletic skill development, we hypothesize

that (a) SEB skills may be more amenable than personality traits to intervention; (b) an iterative cycle of instruction, practice, and feedback may be the most important element of an effective intervention; (c) other elements may enhance an intervention's effectiveness by sustaining learners' motivation and engagement with this cycle; and (d) intensive, sustained interventions are more likely to prove effective than brief interventions or subtle "nudges" (Ambrose et al., 2010; Meyers et al., 1995).

Conclusion

It is an exciting time for researchers and practitioners interested in SEB skills for two key reasons. First, there has been substantial progress in the conceptualization of SEB skills. It is increasingly clear that many important skills can be organized within five major domains that resemble the Big Five personality traits in terms of their behavioral referents but are defined in terms of functionally related capacities rather than general tendencies. Second, there is still important work to be done. In particular, operational measures of SEB skills should reflect—rather than obscure—the distinction between skills and traits. Doing so will help researchers and practitioners address open questions about SEB skills and test promising interventions and policies to promote skill development. We are therefore confident that the years ahead will bring further progress in the scientific understanding and real-world application of SEB skills.

Recommended Reading

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Transparency

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