REL Appalachia Ask A REL Response

College and Career Readiness
September 2018

Question:

What strategies do schools use to promote soft skills and how do those skills relate to later employment and success?

Response:

Thank you for your request to our REL Reference Desk regarding evidence-based information about promoting soft skills in schools. Ask A REL is a collaborative reference desk service provided by the 10 Regional Educational Laboratories (RELs) that, by design, functions much in the same way as a technical reference library. Ask A REL provides references, referrals, and brief responses in the form of citations in response to questions about available education research.

Following an established REL Appalachia research protocol, we searched for peer-reviewed articles and other research reports on promoting soft skills in schools. We focused on identifying resources that specifically addressed strategies for promoting soft skills in schools that may have a positive influence on employment outcomes. The sources included ERIC and other federally funded databases and organizations, research institutions, academic research databases, and general Internet search engines. For more details, please see the methods section at the end of this document.

The research team did not evaluate the quality of the resources provided in this response; we offer them only for your reference. Also, the search included the most commonly used research databases and search engines to produce the references presented here, but the references are not necessarily comprehensive, and other relevant references and resources may exist. References are listed in alphabetical order, not necessarily in order of relevance.

References

Chikeleze, M., Johnson, I., & Gibson, T. (2018). Let's argue: Using debate to teach critical thinking and communication skills to future leaders. *Journal of Leadership Education, 17*(2), 123–137. Retrieved from https://eric.ed.gov/?id=EJ1175843

From the abstract: "Some employers contend that the college graduates they hire should have stronger communication and critical thinking skills upon arrival from their various

college/university programs in which they majored. As higher education continues its efforts to meet the demands for employers, the authors contend that the benefits of participation in debate exercises can be incorporated into various courses as a teaching tool to increase facility with these soft skills. A practical application of debate in a specific organizational leadership course is presented, along with highlights of the student participants' reflections upon the experience, and the initial signs of positive impact on these skills. Suggestions of future application of debate into curricula are also shared."

Cochran, G. R., & Ferrari, T. M. (2009). Preparing youth for the 21st century knowledge economy: Youth programs and workforce preparation. *Afterschool Matters, 8,* 11–25. Retrieved from https://eric.ed.gov/?id=EJ1068483

From the abstract: "In the 21st century, the idea of preparing youth for the workforce has taken on new meaning. The shift to a knowledge economy has brought widespread concern that young people are entering the workforce without the skills employers value most, such as communication, critical thinking, leadership, and teamwork skills. As youth programs evaluate how to enhance their opportunities for adolescents, workforce preparation should be part of the discussion. In this paper, the authors will make the case for a focus on workforce preparation and examine youth programs as a context for workforce development. Of the many ways to blend youth development and workforce preparation, the authors will focus specifically on work-based learning. They have synthesized principles that can inform youth workforce development, with program examples to illustrate them. Finally, they consider the benefits and challenges of workforce preparation in youth programs and summarize the roles youth programs can take."

Garcia, E. (2016). *The need to address noncognitive skills in the education policy agenda*. (Briefing paper #386). Washington, DC: Economic Policy Institute. Retrieved from https://eric.ed.gov/?id=ED558126

From the executive summary: "This paper contends that noncognitive skills should be an explicit pillar of education policy. It contributes to the growing interest in these skills by reviewing what we know about noncognitive skills, including what they are, why they matter, and how they enter into the education process. We then extend the discussion by providing a tentative list of skills that are both important for and can be nurtured by schools. Contrasting what we know about noncognitive skills with how policy currently treats them, we contend that noncognitive skills deserve more attention in the education policy arena. Toward this end, we propose some guidelines for how to design education policies that better nurture them, and describe the kinds of research needed to inform policy and practice. This paper is composed of two main sections. The first defines noncognitive skills and explores the evidence-based findings on their role in education and adulthood outcomes, and on how they are nurtured. The second section examines how education policy could help schools better nurture noncognitive skills. It includes some suggestions for researchers on how their work can provide new evidence geared toward policymakers, and a discussion of the goals of public education, education reform, and accountability."

Gutman, L. M., & Schoon, I. (2013). *The impact of non-cognitive skills on outcomes for young people*. London, England: Institute of Education, University of London and the Education Endowment Foundation. Retrieved from https://v1.educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive_skills_literature_review_1.pdf

From the executive summary: "The term 'non-cognitive skills' refers to a set of attitudes, behaviours, and strategies that are thought to underpin success in school and at work, such as motivation, perseverance, and self-control. They are usually contrasted with the 'hard skills' of cognitive ability in areas such as literacy and numeracy, which are measured by academic tests. Non-cognitive skills are increasingly considered to be as important as—or even more important than— cognitive skills or IQ in determining academic and employment outcomes. Indeed, there is now growing attention from policymakers on how such 'character' or 'soft' skills can be developed in children and young people. However, despite growing interest in this topic, the causal relationship between non-cognitive skills and later outcomes is not well established. This rapid literature review is intended to summarise the existing evidence on how 'non-cognitive skills' can be defined and measured; assess the evidence that such skills have a causal impact on later outcomes; and the role of select interventions that aim to improve non-cognitive skills in children and young people. It has been jointly funded by the Education Endowment Foundation and Cabinet Office to inform future work in this area."

Hoffman, N. (2015). *Let's get real: Deeper learning and the power of the workplace.* (Deeper Learning Research Series). Boston, MA: Jobs For the Future. Retrieved from https://eric.ed.gov/?id=ED561285

From the abstract: "In the United States, we tend to assume that young people should become educated and then go to work, as though the two were entirely separate stages of life. This dichotomy blinds us to the fact that work itself can be a powerful means of education-giving students opportunities to apply academic subject matter to real-world problems, and pushing adolescents to grow up and gain other deeper learning skills such as following difficult assignments through to completion, working in teams, solving unscripted problems, and communicating effectively with colleagues of differing ages and backgrounds. In the paper 'Let's Get Real: Deeper Learning and the Power of the Workplace,' author Nancy Hoffman argues that the current discussion about deeper learning in the nation's high schools ought to acknowledge that career readiness isn't just an outcome of the K–12 curriculum but a process – often overlapping with academic studies – through which young people learn deeply and prepare for working life. Hoffman makes the case that current federal, state, and local policies could be updated to incentivize and enable work-based learning opportunities and alignment between expectations for success in education and success in the workplace. Greatly diminished youth employment opportunities in today's labor market make work-based learning opportunities connected to educational pathways more critical than ever. Hoffman contends that there are models of high-quality work-related education in many states, some promoted through national initiatives and networks, others impressive 'one off' schools and programs, as well as

vocational or career and technical education, or CTE, schools and centers. The problem is that such excellent programs and schools currently serve only a relatively small number of students. And the question is: can these excellent models be further scaled up and their approaches refined and adapted in our many comprehensive high schools? Can the U.S. develop a system that promotes career education? Hoffman argues that there are several policy opportunities that could make this goal a reality."

Kautz, T., Heckman, J. J., Diris, R., Ter Weel, B., & Borghans, L. (2014). *Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success.* (NBER Working Paper No. 20749). Cambridge, MA: National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w20749

From the abstract: "This paper reviews the recent literature on measuring and boosting cognitive and noncognitive skills. The literature establishes that achievement tests do not adequately capture character skills: personality traits, goals, motivations, and preferences that are valued in the labor market, in school, and in many other domains. Their predictive power rivals that of cognitive skills. Reliable measures of character have been developed. All measures of character and cognition are measures of performance on some task. In order to reliably estimate skills from tasks, it is necessary to standardize for incentives, effort, and other skills when measuring any particular skill. Character is a skill, not a trait. At any age, character skills are stable across different tasks, but skills can change over the life cycle. Character is shaped by families, schools, and social environments. Skill development is a dynamic process, in which the early years lay the foundation for successful investment in later years. High-quality early childhood and elementary school programs improve character skills in a lasting and cost-effective way. Many of them beneficially affect later-life outcomes without improving cognition. There are fewer long-term evaluations of adolescent interventions, but workplace-based programs that teach character skills are promising. The common feature of successful interventions across all stages of the life cycle through adulthood is that they promote attachment and provide a secure base for exploration and learning for the child. Successful interventions emulate the mentoring environments offered by successful families."

Kautz, T., & Zanoni, W. (2014). *Measuring and fostering non-cognitive skills in adolescence: Evidence from Chicago Public Schools and the OneGoal Program*. Chicago, IL: University of Chicago. Retrieved from https://www.onegoalgraduation.org/wp-content/uploads/2018/04/Measuring-and-Fostering-Non-Cognitive-Skills-in-Adolescence-Evidence-from-Chicago-Public-Schools-and-the-OneGoal-Program.pdf

From the abstract: "Recent evidence has established that non-cognitive skills (e.g., persistence and self-control) are valuable in the labor market and are malleable throughout adolescence. Some recent high school interventions have been developed to foster these skills, but there is little evidence on whether they are effective. Using administrative data, we apply two methods to evaluate an intervention called OneGoal, which attempts to help disadvantaged students attend and complete college in part by teaching non-cognitive skills. First, we compare the outcomes of participants and non-participants with similar pre-

program cognitive and non-cognitive skills. In doing so, we develop and validate a measure of non-cognitive skill that is based on readily available data and rivals standard measures of cognitive skill in predicting educational attainment. Second, we use an instrumental variable difference-in-difference approach that exploits the fact that OneGoal was introduced into different schools at different times. We estimate that OneGoal improves academic indicators, increases college enrollment by 10–20 percentage points, and reduces arrest rates by 5 percentage points for males. We demonstrate that improvements in non-cognitive skill account for 15–30 percent of the treatment effects."

Lerman, R. I. (2013). Are employability skills learned in U.S. youth education and training programs? *IZA Journal of Labor Policy, 2*(6). Retrieved from https://link.springer.com/article/10.1186/2193-9004-2-6

From the abstract: "Skills are a central source of high productivity and economic well-being. But what do we mean by productive skills? Both with regard to measurement and policy, the primary focus in the U.S. has been on academic skills, as measured by tests of reading, writing and math abilities and by educational attainment, including degrees completed. However, a new consensus is emerging that an array of non-academic skills and occupational skills may be at least as important for labor market success. After reviewing the evidence on respective roles of various types of skills required by employers, this paper examines the skill-enhancing effects of several youth programs and demonstrations, with an emphasis on how well these efforts raise non-academic skills directly through purposeful activities or indirectly as a result of other employment-enhancing services."

Lippman, L., Atienza, A., Rivers, A., & Keith, J. (2008). *A developmental perspective on college & workplace readiness.* Washington, DC: Child Trends. Abstract retrieved from https://eric.ed.gov/?id=ED510749; full text available at https://www.childtrends.org/wp-content/uploads/2013/04/Child_Trends-2008_09_15_FR_ReadinessReport.pdf

From the abstract: "This report provides a developmental perspective on what competencies young people need to be ready for college, the workplace, and the transition to adulthood. National hand-wringing about the lack of preparedness of high school graduates for college and the workplace has catalyzed researchers, educators, and policymakers to define the skills and competencies students need in order to be successful. These prescriptions tend to focus 'either' on college readiness 'or' on workplace readiness. At the same time but on a separate track, youth development research has identified the assets that youth need in order to make a successful transition to adulthood. Presumably, these three groups of competencies should overlap. Do high school students need the same competencies in order to be ready for college, the workplace, and a healthy transition to adulthood? If so, is there agreement on what competencies are needed? If not, how do the necessary competencies differ across these three areas of life? Are there some competencies which are emphasized for healthy youth development which could be usefully applied to remedy gaps in college and workplace readiness, and vice versa? This report seeks to widen the road to success for high school students. It also provides a sense of the degree to which research in each field indicates a need for each competency. The

competencies needed are organized into five domains of youth development: physical, psychological, social, cognitive, and spiritual. Because certain groups of students have particular challenges in being successful, this report also focuses on strategies that have proven helpful for groups that face greater challenges in meeting the readiness criteria for college, the workplace, and the transition to adulthood. These include low-income and minority students, Latinos and English language learners, students with disabilities, disconnected youth, youth aging out of foster care, and sexual minority youth."

MDRC. (2018). *An innovative approach to preparing students for college and careers: YouthForce NOLA.* (Issue focus). New York, NY: Author. Retrieved from https://eric.ed.gov/?id=ED583042

From the abstract: "Career pathways models are an increasingly popular approach to engaging high school students and equipping them with the academic, technical, and 'soft' skills they need to succeed in postsecondary education and careers. When linked with local labor market needs, career pathways models can also create a talent pipeline for local employers. At the high school level, these programs typically combine core academic courses with a sequence of career and technical education (CTE) courses in a particular industry and incorporate a variety of work-based learning experiences. Despite the proliferation of career pathways models over the past decade, little rigorous evidence exists on their effectiveness for high school students. One exception is the evidence for career academies, which are small learning communities within larger high schools that combine academic and technical curricula around a career theme and incorporate work-based learning. MDRC's random assignment evaluation in the mid-1990s found that the program led to large and sustained increases in earnings, particularly for young men. An example of a promising career pathways initiative that incorporates elements of career academies is YouthForce NOLA. The initiative aims to prepare New Orleans public high school students for post-secondary education opportunities and careers in three industry clusters with strong local employer demand and family-supporting wages--health sciences, creative media and technology, and skilled crafts, such as advanced manufacturing and construction. In 2016, MDRC began conducting a process and implementation study of YouthForce NOLA. The main goals of the study are to assess the initiative's progress in putting key components in place and to document the experiences and perceptions of program stakeholders, including teachers, students, parents, and employer partners."

Quint, J., & Condliffe, B. (2018). *Project-based learning: A promising approach to improving student outcomes.* (Issue focus). New York, NY: MDRC. Retrieved from https://eric.ed.gov/?id=ED580907

From the abstract: "The concept of project-based learning (PBL) has garnered wide support among a number of K–12 education policy advocates and funders. PBL is viewed as an approach that enables students to develop the '21st century competencies' — cognitive and socioemotional skills – needed for success in college and careers. This issue focus, pulling from a recent MDRC working paper, 'Project-Based Learning: A Literature Review' (ED578933), defines project-based learning, describes how it works and what it takes to

implement PBL, and provides recommendations for advancing research on PBL's design principles, effectiveness, and implementation."

Schanzenbach, D.W., Nunn, R., Bauer, L., Mumford, M., & Breitwieser, A. (2016). *Seven facts on noncognitive skills from education to the labor market*. Washington, DC: The Hamilton Project. Retrieved from http://www.hamiltonproject.org/papers/seven_facts_on_noncognitive_skills_from_education_to_the_labor_market

From the introduction: "Cognitive skills—that is, math and reading skills that are measured by standardized tests—are generally understood to be of critical importance in the labor market. Most people find it intuitive and indeed unsurprising that cognitive skills, as measured by standardized tests, are important for students' later-life outcomes. For example, earnings tend to be higher for those with higher levels of cognitive skills. What is less well understood—and is the focus of these economic facts—is that noncognitive skills are also integral to educational performance and labor-market outcomes. Due in large part to research pioneered in economics by Nobel laureate James J. Heckman, there is a robust and growing body of evidence that noncognitive skills function similarly to cognitive skills, strongly improving labor-market outcomes. These noncognitive skills—often referred to in the economics literature as soft skills and elsewhere as social, emotional, and behavioral skills—include qualities like perseverance, conscientiousness, and self-control, as well as social skills and leadership ability (Duckworth and Yeager 2015). The value of these qualities in the labor market has increased over time as the mix of jobs has shifted toward positions requiring noncognitive skills. Evidence suggests that the labor-market payoffs to noncognitive skills have been increasing over time and the payoffs are particularly strong for individuals who possess both cognitive and noncognitive skills (Deming 2015; Weinberger 2014)."

Warren, J. M., & Hale, R. W. (2016). Fostering non-cognitive development of underrepresented students through rational emotive behavior therapy: Recommendations for school counselor practice. *Professional Counselor, 6*(1), 89–106. Retrieved from https://eric.ed.gov/?id=EJ1109930

From the abstract: "The non-cognitive factors (NCFs) endorsed by Sedlacek (2004) appear to align with the core values of rational emotive behavior therapy (REBT). This article explores theoretical and empirical evidence that suggests REBT fosters the development of NCFs. School counselors can promote non-cognitive development by embedding REBT throughout direct and indirect student services. REBT-based strategies and interventions can aid school counselors in their efforts to close the achievement gap and foster college and career readiness among students, especially those from historically underrepresented populations. Recommendations for school counseling practice are provided."

Whitehurst, G. J. (2016). *Hard thinking on soft skills.* (Evidence Speaks Reports, Volume 1, #14). Washington, DC: Center on Children and Families at Brookings. Retrieved from https://eric.ed.gov/?id=ED568264

From the abstract: "The nation's PK–12 education ecosystem is poised to embrace programs intended to enhance soft skills. Soft skills are generally defined by exclusion as personal qualities other than the formal knowledge transmitted by schools that affect student adjustment, i.e., the effort that students put into their work and their social skills. Such soft skills are far too important for the education reform effort associated with them to suffer the fad-like fate of far too many education reforms of the past. There are danger signs in that regard. The goals of this report, which will extend over subsequent reports, are: (1) to raise important questions in the context of the expansion of efforts by schools to enhance the soft skills of their students and measure outcomes; (2) to suggest what prudent school officials and policymakers should do with respect to incorporating soft skills into the school curriculum given the number of unanswered critical questions about how to proceed; and (3) to spur the organizations and individuals that are at the forefront of the movement to increase their interest and investment in the many unknowns of soft skills reform. The embrace of soft skills by education reformers is well in advance of the development of conceptual, instructional, measurement, and accountability models of soft skills that are appropriate to education settings. It will take time to develop a productive program of work that can be incorporated into school reform. In the meantime, prudent policy and incremental experiments in practice are in order."

Additional Ask A REL Responses to Consult

Ask A REL Mid-Atlantic at Mathematica Policy Research. (2017). *What are the knowledge, skills, and experiences high school students need to transition successfully into careers?* Retrieved from https://ies.ed.gov/ncee/edlabs/regions/midatlantic/askarel_14.asp

Ask A REL Mid-Atlantic at Mathematica Policy Research. (2018). *What classroom strategies represent best practices for helping students learn about and build soft skills (e.g. communication, collaboration, and critical thinking)?* Retrieved from https://ies.ed.gov/ncee/edlabs/regions/midatlantic/askarel_39.asp

Ask A REL Mid-Atlantic at Mathematica Policy Research. (2018). *What does research tell us about identifying critical workforce skills and competencies that are needed for high-demand occupational sectors?* Retrieved from https://ies.ed.gov/ncee/edlabs/regions/midatlantic/askarel_45.asp

Ask A REL Midwest at American Institutes for Research. (2018). *What does the research say about the initiatives and programs that have the greatest impact on youth employability?* Retrieved from https://ies.ed.gov/ncee/edlabs/regions/midwest/askarel/2018/youth-employability.aspx

Additional Organizations to Consult

College and Career Readiness and Success Center: https://ccrscenter.org/

From the website: "The College and Career Readiness and Success Center (CCRS Center) is dedicated to ensuring all students graduate high school ready for college and career

success. The mission of the CCRS Center is to serve Regional Comprehensive Centers in building the capacity of states to effectively implement initiatives for college and career readiness and success. Through technical assistance delivery and supporting resources, the CCRS Center provides customized support that facilitates the continuous design, implementation, and improvement of college and career readiness priorities."

Methods

Keywords and Search Strings

The following keywords and search strings were used to search the reference databases and other sources:

- ("soft skills" OR "non-cognitive skills" OR "non-academic skills" OR "21st century skills" OR "workplace communication") AND (work* OR job OR employ* OR success OR labor force development OR job training OR work experience programs)
- ("soft skills" OR "non-cognitive skills" OR "non-academic skills" OR "21st century skills" OR "workplace communication") AND students AND (promote* OR teach)

Databases and Resources

We searched ERIC, a free online library of more than 1.6 million citations of education research sponsored by the Institute of Education Sciences (IES), for relevant resources. Additionally, we searched the academic database ProQuest, Google Scholar, and the commercial search engine Google.

Reference Search and Selection Criteria

In reviewing resources, Reference Desk researchers consider—among other things—these four factors:

- Date of the publication: Searches cover the most current information (i.e., within the last ten years), except in the case of nationally known seminal resources.
- Search priorities of reference sources: Search priorities include IES, nationally funded, and certain other vetted sources known for strict attention to research protocols. Applicable resources must be publicly available online and in English.
- Methodology: The following methodological priorities/considerations guide the review and selection of the references: (a) study types—randomized controlled trials, quasi experiments, surveys, descriptive data analyses, literature reviews, policy briefs, etc., generally in this order; (b) target population, samples (representativeness of the target population, sample size, volunteered or randomly selected), study duration, etc.; (c) limitations, generalizability of the findings and conclusions, etc.
- Existing knowledge base: Vetted resources (e.g., peer-reviewed research journals) are the primary focus, but the research base is occasionally slim or nonexistent. In those cases, the best resources available may include, for example, reports, white papers,

guides, reviews in non-peer-reviewed journals, newspaper articles, interviews with content specialists, and organization websites.

Resources included in this document were last accessed on September 11, 2018. URLs, descriptions, and content included here were current at that time.