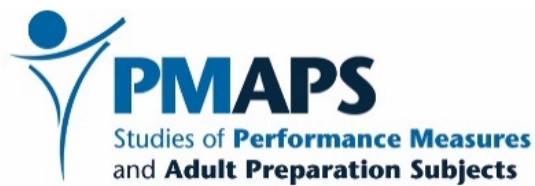


# CONCEPTUAL MODELS FOR ADULTHOOD PREPARATION SUBJECTS WITHIN THE PERSONAL RESPONSIBILITY EDUCATION PROGRAM (PREP)



PREP: Studies of Performance Measures and Adulthood Preparation Subjects  
OPRE Report Number 2021-21  
February 2021

## **IV. CONCEPTUAL MODEL FOR ADDRESSING EDUCATIONAL AND CAREER SUCCESS IN PREP**

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Suggested Citation: Clary, Elizabeth, Heather Zaveri, Kristin A. Moore, Mindy E. Scott, Christopher Jones, Katie Eddins, Katie Adamek, Deana Around Him, Monica Arkin, and Isabel Griffith. (2021). "Conceptual models for Adulthood Preparation Subjects in PREP." OPRE Report #2021-21. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

## IV. CONCEPTUAL MODEL FOR ADDRESSING EDUCATIONAL AND CAREER SUCCESS IN PREP

For the APS conceptual models study, the study team developed conceptual models for the six APSs (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how to offer such programming within adolescent pregnancy prevention programs, and what outcomes are anticipated. Each conceptual model draws on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.

PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.

The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.

This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for educational and career success through a schematic and supporting narrative. It starts with defining educational and career success (Section A) and briefly describing how the study team developed the conceptual model (Section B). Sections C through H review each component of the model and the supporting literature. Section I discusses conclusions.

### A. Working definition of educational and career success

The legislation authorizing PREP provided a limited definition for each APS.<sup>8</sup> To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants, librarians, and ACF and refined it based on their feedback. The study team continued to refine the working

<sup>8</sup> [https://www.ssa.gov/OP\\_Home/ssact/title05/0513.htm](https://www.ssa.gov/OP_Home/ssact/title05/0513.htm).

definition throughout the development of the conceptual model based on reviewed literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition focuses on how the subject applies to PREP. The working definition for educational and career success is:

Obtaining at least a high school diploma or the equivalent is a starting point for long-term career success. Encouraging youths' academic performance and school attendance and engagement may foster improvements in grades and school retention for youth in traditional and alternative education settings. Long-term success can involve multiple paths to completing postsecondary education or training and finding stable and well-paying employment. The development of hard and soft skills for school and workplace productivity, preparation for postsecondary education and employment, job seeking and retention, career planning, independent living, lifelong learning, and career adaptability support future educational and career success.

## **B. Overview of the model development process**

The study team developed each APS model through a multi-step process (described in more detail in Chapter II). First, they conducted a literature review on each individual APS. Then they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each APS. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the conceptual models. Next, the study team describes the process of developing the conceptual model for educational and career success.

**Research literature review.** The study team started by conducting a targeted review of the research literature on educational and career success. They systematically searched, screened, and reviewed articles and studies, and then extracted and summarized findings using a template that included sections for each intended component of the educational and career success conceptual model. In total, for educational and career success, the team reviewed 40 documents, published from 2002 through January 2019: 11 literature reviews or meta-analyses, five empirical studies, four theoretical articles, four program evaluations, two proposed program models, and 14 other documents, including a description of key factors for effective programs, resource guides, study reviews, and articles or books that fall into multiple categories.<sup>9</sup> (See Appendix A for a list of references by chapter, and Appendix B for detailed tables describing the literature review process.)

**Primary keywords:** Education or career success

**Secondary keywords:** Soft or hard job skills, employment preparation, education engagement, job seeking, independent living, school productivity, workplace productivity, education success, career success, drop-out prevention, academic performance, increased school attendance or engagement, continuing education, programming, sexual health

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<sup>9</sup> Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

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**Interviews with PREP grantees and providers.** The study team interviewed existing PREP grantees and providers about their APS programming and implementation. These interviews addressed APS program design and implementation, curricula or materials used to cover the APS, and the receptivity of youth to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.<sup>10</sup> On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

Ten grantees interviewed said they covered educational and career success. Typically, respondents paired educational and career success and financial literacy. They offered this content to primarily lower-income, minority youth.

**Expert and stakeholder feedback.** The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure that they included all relevant theory and research on the topics, and that the topics could enhance or expand PREP outcomes if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APS; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

### **C. Educational and career success conceptual model**

Figure IV.1 shows the conceptual model for the educational and career success APS. The definition of educational and career success and the theory of change are at the top, above the conceptual model. The model includes precursors that influence youth who participate in educational and career programs as part of PREP, such as developmental tasks and risk and protective factors. The model also identifies topics for inclusion in educational and career programs, design and implementation features for PREP programs, and outcomes that may be affected by offering this programming. Outcomes are presented as enhanced and expanded for the PREP program. Enhanced outcomes refers to changes to outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP: sexual activity; contraceptive use; and incidence of pregnancy and sexually transmitted infections. Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth when content, lessons, or instruction for educational and career programs are added to the PREP program. Sections D through H describe each component of the conceptual model in Figure IV.1, expanding on information contained in the figure, based on the supporting literature. For some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

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<sup>10</sup> As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

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## **D. Precursors**

The conceptual model starts with three sets of precursors for educational and career success: developmental tasks, risk factors, and protective factors. Some individual, peer, family, school, and community factors interact and influence how youth develop. These contextual factors often reflect characteristics and experiences that youth bring to a program, but they are not factors that programs should or can expect to change through youths' participation. While not included in the conceptual model figure, programs should consider these factors for their target populations and recognize that their relevance might vary, depending on the APS. For educational and career success, contextual factors to consider include past educational experiences for youth, youth and parent demographic characteristics, family income and economic status, and educational and economic opportunities available in the community where youth grow up. In some cases, contextual factors can encourage youth to avoid negative or risky behaviors; in others, these factors may place youth at higher risk for involvement in activities that contribute to poor developmental and behavioral outcomes. Also, certain individual-level factors (such as age, grade level, or developmental level) might moderate youths' experiences in the program and affect their outcomes.

The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through expected trajectories that occur in interconnected social, emotional, cognitive, and physical domains. Risk factors make youth more likely to engage in negative behaviors or harder to develop strengths. In contrast, protective factors promote positive development by making youth less likely to engage in negative behaviors and helping them to mitigate risks and promote resilience. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of individual, familial, or community risk factors. Promotive factors overlap with protective factors (for example, positive family relationships) but are more generally beneficial for all youth, whereas protective factors come into play in the context of risk (National Research Council and Institute of Medicine 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

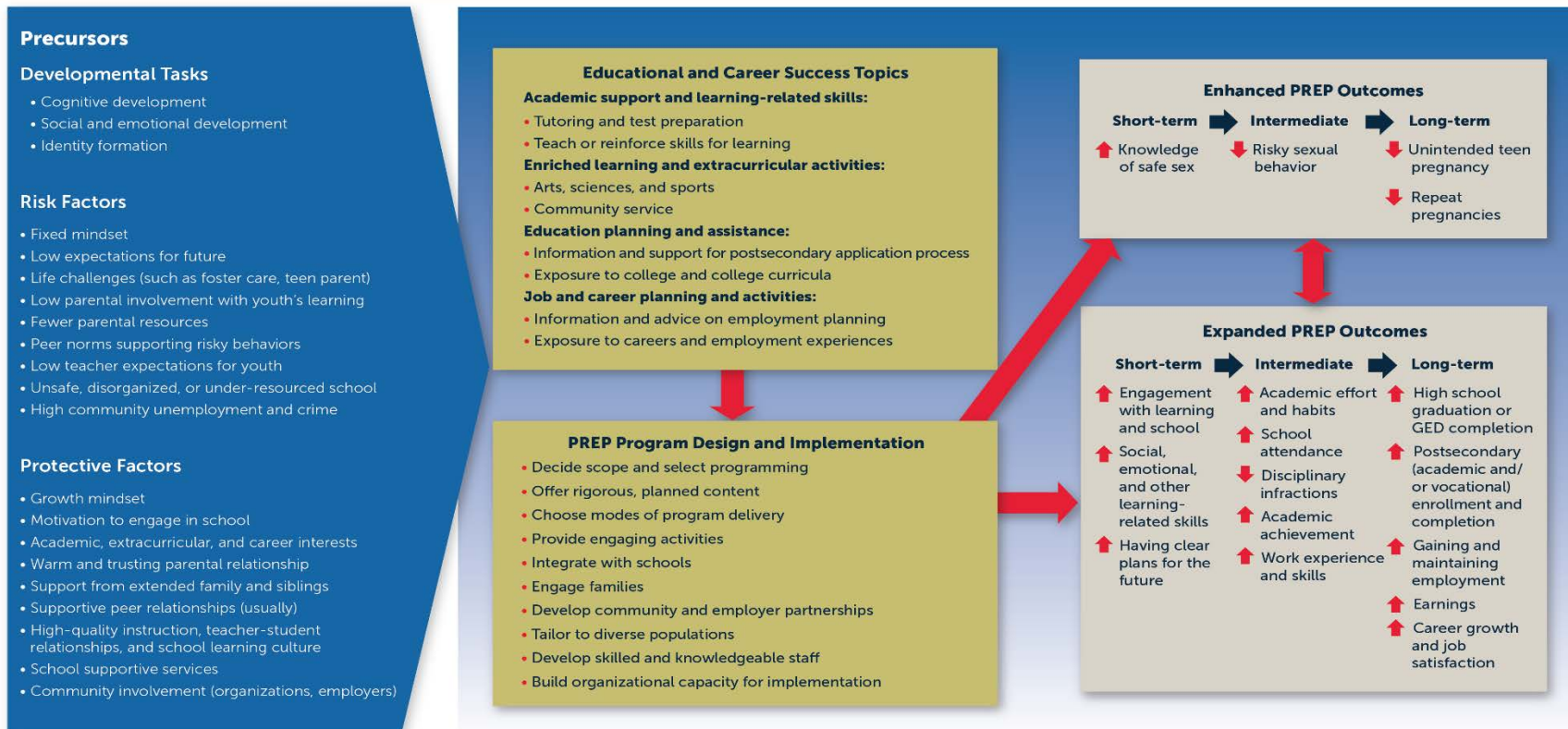
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**Figure IV.1. Educational and Career Success Conceptual Model**

**Educational and Career Success:** Obtaining at least a high school diploma or the equivalent is a starting point for long-term career success. Encouraging youths’ academic performance and school attendance and engagement may foster improvements in grades and school retention for youth in traditional and alternative education settings. Long-term success can involve multiple paths to completing postsecondary education or training and finding stable and well-paying employment. The development of hard and soft skills for school and workplace productivity, preparation for postsecondary education and employment, job seeking and retention, career planning, independent living, lifelong learning, and career adaptability support future educational and career success.

**Theory of Change:** Programs can help youth in both traditional and alternative education settings overcome barriers and build on strengths to achieve educational and career success. After contextual factors are accounted for, educational and career success starts with youths’ attitudes and behaviors toward learning. Increased engagement in learning can lead to increased knowledge, skills, and academic achievement. Youth can follow different paths to achieve key outcomes, including graduating from high school, enrolling in and completing postsecondary education or training, and starting a career or steady, well-paying employment that promotes self-sufficiency. Programs may offer youth activities to foster educational and career success, including academic activities to increase knowledge, enrichment activities to stimulate interest and motivation in learning, and activities to help youth plan their future education and careers. Programs may increase effectiveness by influencing youths’ family, peer, school, and community contexts, and accounting for youths’ circumstances and strengths.



**Developmental tasks.** Youths' cognitive, social, and emotional development can affect their potential for later educational and career success. Youth must rely on cognitive skills (such as attention, synthesizing information, and critical thinking) in academic settings to learn and acquire knowledge (Policy Studies Associates 2014; Jensen 2009). Social and emotional development help youth achieve academically and learn career-specific knowledge and skills in the workforce. For example, self-management skills allow youth to regulate emotions, control impulses, and persevere through learning challenges. Relationship skills help youth cooperate with their peers and, in the future, their colleagues (Durlak et al. 2015; Hooker and Brand 2009). Several social and emotional skills relate to the concept of resilience, which describes how youth can succeed despite facing considerable adversity (Thornton and Sanchez 2010; Ruffolo 2008; Durlak et al. 2015). Finally, youth are forming their identity, which includes educational facets such as how they define themselves as a learner and what their abilities and future potential are, as well as broader facets, such as their ethnic or cultural identity. Educational and broader facets of identity can interact and affect youth engagement with learning and other attitudes and behaviors connected to educational and career success, such as expectations for the future or studying and participating in class (Yonezawa et al. 2009; Dumka et al. 2013). Ethnic and cultural identity is especially important for youth of color, such as African American, Hispanic/Latino, and Native American youth, for whom ethnic identity can evoke experiences of discrimination and historical trauma, which can harm their sense of self. Fortunately, ethnic identity can also consist of cultural connectedness, pride, and values that are affirmative (Dumka et al. 2013; Thornton and Sanchez 2010; Olguin and Keim 2009).

Youth participating in educational and career programs will continue to develop their cognitive skills, social and emotional skills, and identity during program participation. However, at the outset, youth begin with varied developmental histories. In particular, their development has already been affected by previous educational experiences and by the contextual factors discussed next. A key overarching factor is the socioeconomic disadvantage faced by the populations of youth served by PREP programs. For example, growing up in poverty means that children deal with emotional and social challenges, cognitive lags, and other issues, such as acute and chronic stressors, that can impede their ability to learn in school (Jensen 2009; National Research Council 2004).

**Risk factors.** Peers, family, school, and community environments interact and influence how youth develop. In particular, risk and protective factors can be organized into multiple levels through the social-ecological framework, which considers the complex interplay between individuals, their relationships, and broader institutional and community factors (Bronfenbrenner and Morris 2006). The research literature reviewed consistently described five ecological contexts as having factors linked with educational and career success: individual, family, peer, school, and community (or neighborhood) (Ruffolo 2008; Hopson et al. 2014; Hammond et al. 2007; National Research Council 2004; Henderson and Mapp 2002; Bowen et al. 2008).

Youths' educational and career success is affected by their attitudes and values about themselves and learning; goals and expectations for their futures; and academic knowledge, skills, and abilities. For example, youth may have a "fixed mindset" regarding their intellectual abilities and think they cannot improve their intelligence regardless of the effort they put into learning (Dweck 2006). Many youth in PREP have grown up under disadvantaged circumstances that lead to risk factors in these areas. In addition, some youth face particularly challenging



circumstances, such as dropping out of school and returning to complete their education, living in a foster care setting, being placed in a juvenile detention center, experiencing abuse or neglect, and being pregnant or parenting (Princiotta and Reyna 2009; Ameen and Lee 2012; Vacca 2008; Mallett 2012; Costello 2014; Healthy Teen Network 2009).

Potential risk factors can also come from parents' behavior and practices (what they do) (McNair and Johnson 2009); their attitudes and expectations toward learning (Dumka et al. 2013; Centers for Disease Control and Prevention 2009); and in turn their access to resources—including time, human, social, and financial capital—and the quality of their relationship with their children (Bailey and Bradbury-Bailey 2010). An especially important risk factor is low parental involvement with youths' learning, either at home (such as not discussing school activities) or at school (such as not volunteering at school events) (Hammond et al. 2007; Henderson and Mapp 2002). Many of these risk factors are connected to the low incomes and financial stresses experienced by families of youth in PREP, which affect parents' ability to be involved with their children's learning. For example, a parent working an evening shift may not have time to discuss school with their child or attend a school event. In addition to family influences, peer norms about educational behavior (such as thinking that skipping classes is acceptable) and risky behavior (such as thinking that risky sexual behaviors or substance use are acceptable) are influential and may be risk factors for youth (Stanard et al. 2010; Centers for Disease Control and Prevention 2009).

Finally, school characteristics affect youths' chances for educational and career success (Ruffolo 2008). Low-skilled teachers, those who do not form strong relationships with their students, and those with low student expectations can all be risk factors for poor educational and career outcomes (Dweck 2006; Jensen 2009). The school environment may be a risk factor through a lack of safety or organization, and schools may lack necessary resources. Youth enrolled in non-traditional school settings, such as alternative schools or programs located within but separated from traditional schools, face additional risk factors if their schools use a disciplinary or punitive approach instead of one focused on education (Dupper 2008). Expanding the context from schools to the broader community, environmental factors such as poor economic conditions, high unemployment, and high crime rates also serve as risk factors for youth. Although these risk factors occur predominantly in disadvantaged urban neighborhoods, many rural communities also experience issues, such as a lack of access to services and to educational and career opportunities (National Research Council 2004; Jensen 2009).

**Protective factors.** Many youth have attitudes, values, goals, and expectations that protect against the disadvantages they face and support educational and career success. For example, self-efficacy and motivation to engage in school and avoid risky behavior are protective factors (McNair and Johnson 2009; Hammond et al. 2007; National Research Council 2004). Similarly, youth can hold positive attitudes, such as a "growth mindset" where they believe they can improve their intelligence through effort; this mindset is linked to stronger academic behaviors (Dweck 2006). Many youth have also developed their own interests in academic subjects, extracurricular activities, and potential careers. Such interests, especially those connected with academic subjects, can function as "sparks" that help youth thrive and overcome struggles with learning (Scales et al. 2011).

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Parents and families serve as protective factors through their education-related attitudes and involvement, parental resources, and relationships with their children (Henderson and Mapp 2002). One key protective factor for youth is having a warm and trusting relationship with their parent or caregiver, which makes them more influenced by parenting practices and attitudes (Stanard et al. 2010). Extended family members and siblings can also influence youth by providing support and complementing parental resources (Thornton and Sanchez 2010; Henderson and Mapp 2002). This is especially important for youth who live in nontraditional homes with caregivers other than their birth parents, such as grandparents, other family members, or foster parents. In addition to families, having stable and supportive peer relationships is usually a protective factor. However, it is important for peers to hold prosocial norms about education, such as the value of participating in school activities and completing homework (Stanard et al. 2010; Centers for Disease Control and Prevention 2009).

In traditional schools and alternative educational settings, teachers who develop supportive relationships with their students and provide high quality instruction may be protective forces for youth who face risks. In addition, the availability of supportive services, such as tutoring or counseling, may help struggling youth by supplementing classroom instruction or addressing non-academic barriers affecting learning (What Works Clearinghouse 2007; Hooker and Brand 2009). Schools can also help youth by fostering a positive learning culture, which may include school staff prioritizing student learning, effectively using instructional time, and expecting all students to succeed (Centers for Disease Control and Prevention 2009). Finally, schools and districts with more resources have greater capacity to develop their teachers, provide support services, and facilitate a culture of learning (Hopson et al. 2014; Franklin et al. 2012).

Organizational and employer involvement in the community may also support youth. Organizations such as churches and nonprofit agencies can provide, or help youth and families obtain, educational, health, and social services. Assistance that focuses specifically on student learning, such as training community volunteers to tutor youth, is more likely to affect educational outcomes (Henderson and Mapp 2002). Having a paid job can help youth develop important skills and prepare them for future educational and career success, though working a high number of hours—likely due to a need to support their family financially—puts youth at risk for dropping out of school (Hooker and Brand 2009; Hammond et al. 2007). Employers may expose youth to future jobs and opportunities that could encourage them to focus on education and careers.

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## E. Theory of change for educational and career success

### Theory of change

Programs can help youth in both traditional and alternative education settings overcome barriers and build on strengths to achieve educational and career success. After contextual factors are accounted for, educational and career success starts with youths' attitudes and behaviors toward learning. Increased engagement in learning can lead to increased knowledge, skills, and academic achievement. Youth can follow different paths to achieve key outcomes, including graduating from high school, enrolling in and completing postsecondary education or training, and starting a career or steady, well-paying employment that promotes self-sufficiency. Programs may offer youth activities to foster educational and career success, including academic activities to increase knowledge, enrichment activities to stimulate interest and motivation in learning, and activities to help youth plan their future education and careers. Programs may increase effectiveness by influencing youths' family, peer, school, and community contexts, and accounting for youths' circumstances and strengths.

Educational and career success is vital to the welfare of individuals and society, but many youth have poor education and career outcomes (Afterschool Alliance 2011; Hooker and Brand 2009; Bowen et al. 2008). Youth may have been hindered by contextual disadvantages (often family or neighborhood poverty) that put them at risk for poor cognitive and social-emotional development and other negative outcomes. At the same time, youth have strengths: many show resilience, develop solutions to improve over time, or are able to thrive by pursuing their interests and passions (Scales et al. 2011; Franklin et al. 2012). Despite the challenging circumstances many youth face, they have the potential to succeed (Jensen 2009). Targeted programs can help youth build on their strengths so they can succeed in school and in their careers. Youth are also affected by their experiences, which accumulate throughout their childhood and form a key part of their context. Educational experiences are especially important since youth are in school for at least a decade, and learning and achievement in earlier years influence later outcomes.

Educational and career success is influenced by youths' knowledge and skills and their engagement in learning, which in turn is influenced by their attitudes and interests (Hooker and Brand 2009). Youths' attitudes, mindsets, and values, especially toward learning, and future goals and expectations are crucial for educational and career success, and can be influenced by interventions (Dweck 2006; Policy Studies Associates 2014). Attitudes and interests affect behaviors, such as how youth act and the decisions they make. This includes positive actions (such as studying or participating in class) and negative ones (such as committing disciplinary infractions or not attending school). Attitudes and behaviors can also influence youths' engagement (Yonezawa et al. 2009; National Research Council 2004) and are linked to academic behaviors and behaviors in other domains, such as involvement in risky sexual activity or substance use (Afterschool Alliance 2008). Improved behaviors and greater engagement lead to greater academic achievement. They also lead to improvements in the broad abilities, skillsets, and mindsets that youth need for readiness in postsecondary education or training, jobs and careers, and life in general. These include the ability to apply learning and to work and stay focused (Krauss et al. 2016).

Finally, improved behaviors and abilities and greater academic achievement lead to long-term outcomes for educational and career success: graduating from high school, enrolling in and completing postsecondary education or training, and finding employment paying living wages. Ideally, the last step would involve a job with career potential, including jobs that require technical credentials. Beyond being full-time, successful employment requires wages and benefits that are sufficient to allow living independently and out of poverty. Youth can achieve

educational and career success through multiple avenues. One youth's path might be graduating from high school, attending and graduating from a four-year college, and starting a job with career potential. Other youth might earn a high school credential (diploma or GED) and enroll in community college or a vocational training program. Some youth might need to enter the workforce sooner than others, returning for more education while or after working.

Because youth are educated primarily in formal school settings, programs in PREP may face limits on how they can contribute to educational and career success outcomes. However, programs can supplement youths' schooling experiences through after-school or out-of-school activities. PREP grantees that are in school systems may be able to work with youth during the school day. The range of influences on educational and career success means there are a variety of ways in which programs can support youth. One way is direct academic instruction to increase youths' knowledge and academic skills about education and career options, which can supplement what they learn in school. Programs can also look ahead on the education-career pathway by helping youth to plan and prepare for college and careers. Another option is to target attitudes and behaviors that influence academic achievement for youth. For example, programs may use enrichment activities to motivate youth, stimulate interest in learning, and engage youth in education by connecting their personal interests and extracurricular activities to academic topics. Programs may target learning-related skills, giving youth tools to learn more in school and on their own. Programs may also try to influence attitudes, such as developing a "growth mindset" that encourages youth to invest effort in learning, even when they face challenges and setbacks (Dweck 2006).

Educational and career programs primarily target youth directly, but they may also have indirect effects by influencing the surrounding context. Programs may increase their capacity to reach youth by reaching out to families and promoting their engagement, both with the program and for learning at home; involving a large group of youth so that peer groups are part of the program; coordinating with schools to ensure support for school-related efforts; and partnering with community organizations and local employers to expand the opportunities available to youth. Whether or not a PREP grantee offers programming during the school day, working collaboratively with schools is important because the instruction and activities for both may be more effective if they are reinforced and supplemented. Finally, programs are more effective if they take into account that youth have different backgrounds, experiences, strengths, interests, and levels of development. Programs may succeed by building on the strengths and interests that youth already have, and encouraging youth to discover new interests (Ruffolo 2008). For some youth in challenging circumstances, programs might need to provide additional services before youth can focus on participation.

## **F. Educational and career success topics**

PREP grantees may address educational and career programming through a range of topics. Although schools are the primary system for educating youth, programs like PREP have flexibility in how they may enhance school-based learning. Some topics are linked directly to academic instruction and support; others may target attitudes, future goals, or interests. Programs could focus on topics in one or multiple areas, depending on scope (Vandell et al. 2007). The literature review identified a range of topics for educational and career programming, though not all the literature discussed evidence of effectiveness for those topics.

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- **Academic support and learning-related skills.** Programs can focus on academics in two areas. First and most directly, programs can supplement the instruction youth receive in schools. For example, they can provide tutoring, homework assistance, and test preparation support (Bailey and Bradbury-Bailey 2010; Mallett 2012; Little and Harris 2003; Hammond et al. 2007). These activities might focus on math and reading or other academic courses such as science or social studies. Second, programs can focus on improving youths' learning-related skills and attitudes, which could include study skills, social and emotional skills critical for learning (such as self-management and self-regulation), or growth mindsets (Centers for Disease Control and Prevention 2009; Jensen 2009; Dweck 2006).
  - **Enriched learning and extracurricular activities.** Although programs with an academic focus may be valuable, evidence suggests that programs providing enriched learning and extracurricular activities have the potential for stronger effects on educational outcomes (Durlak et al. 2015). They do so by increasing youths' motivation and engagement, exploring and developing their interests, and building social and emotional skills that youth can apply to academic learning (Scales et al. 2011; Policy Studies Associates 2014). These activities are especially important for youth at risk for poor education and career outcomes (due to developmental history or risk factors) because many such youth have little or no access to enrichment activities through school or other community contexts. For example, many youth attend alternative schools that emphasize only basic classes and a "skill and drill" approach (Dupper 2008). Enriched learning and extracurricular activities can involve arts (such as drama, music, and dance), sciences and engineering (such as environmental science, architecture), and sports and physical disciplines (such as tai chi, track and field, and basketball) (Policy Studies Associates 2014; Yonezawa et al. 2009; Afterschool Alliance 2011). Activities can also focus on community service and service learning (Afterschool Alliance 2008; Vandell et al. 2007; National Research Council 2004; Berger et al. 2019). Programs can design enriched learning activities so youth earn a micro-credential for demonstrating competencies through them. Micro-credentials, which usually consist of digital badges, are attracting interest from colleges as an alternative approach to demonstrating college readiness, including for at-risk students (Fishman et al. 2018). Examples of early micro-credential programs have covered the STEM disciplines of science, technology, engineering, and math; design; and service learning. Although programs would need to follow best practices for micro-credential providers to promote credibility and transparency, they would work well for the relatively short time that PREP programs have with youth.
  - **Education planning and assistance.** Programs can also help youth navigate their high school education and plan for education after high school (Afterschool Alliance 2011). Many youth, especially those at risk for poor education and career outcomes, have little knowledge of the complex college application and financial aid processes or a sense of the skills and effort needed to succeed in college (Costello 2014; Hooker and Brand 2009; National Research Council 2004). Other youth, especially those enrolling in alternative schools, are often discouraged and do not consider postsecondary education to be within their reach (Dupper 2008; Franklin et al. 2012). Programs can support youths' potential for postsecondary education through two broad areas. First, they can teach
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youth about, and help them with, the application process for postsecondary education. This includes all postsecondary options but might be especially helpful for four-year colleges, which have more complex and intensive application processes. For example, dropout prevention programs have incorporated specific activities, such as visiting colleges or training programs, filling out applications, applying for financial aid, and preparing for entrance exams (What Works Clearinghouse 2007). Second, programs can link youth with colleges that offer an opportunity to earn college credit and gain experience with the rigors of college curricula. These can be bridge programs, dual-enrollment classes, or other formats (Costello 2014; Hooker and Brand 2009). Programs frequently partner with institutions of higher learning (including four-year colleges, community colleges, and vocational programs) to offer these types of activities in their communities. Although the literature and interviewed grantees focused almost entirely on assistance with postsecondary education, programs can also help youth navigate their high school education. For example, they can help youth plan and track progress on steps needed to graduate from high school, or find and obtain educational supports from inside or outside the school district.

- **Job and career planning and activities.** In addition to helping with education planning, programs can help youth plan for employment and future careers (Afterschool Alliance 2011). As with college planning, youth at risk for poor career outcomes often do not have enough knowledge or exposure to work in jobs that can lead to satisfying careers (Hooker and Brand 2009; National Research Council 2004). Programs can support youths' career potential in two areas. First, they can provide information and advice to help youth make career decisions and plans to pursue them (What Works Clearinghouse 2007; Olguin and Keim 2009). Activities include career exploration and advising, employer presentations, and career fairs. Activities can also include help with job application skills, such as navigating a job search, writing a resume, and interviewing. In discussing career options, programs can cover entrepreneurship and self-employment. Second, they can offer youth opportunities to gain career-related exposure and experience, such as networking opportunities, vocational training, apprenticeships, internships, community service, or work-study activities (Ameen and Lee 2012; Healthy Teen Network 2009; Hooker and Brand 2009; Dupper 2008; Berger et al. 2019). Programs can also coordinate with schools so that youth receive school credit for completing these opportunities. Besides providing support and opportunities geared toward future employment and careers, programs can help youth find and manage current jobs, since these can form an important foundation for future career success.

The PREP grantees interviewed or that provided feedback on the model focused their educational and career success programming on the third and fourth categories: supporting education and jobs and career planning. Grantees described specific activities that aligned closely with the topics described in the literature review. However, these grantees were not implementing programming for academic support or enrichment and extracurricular activities.

### **G. Program design and implementation**

The literature review identified several design and implementation considerations for educational and career success programming. This section includes strategies that either showed evidence of effectiveness or that the literature identified as best practices or practices employed by (non-

PREP) programs. The PREP grantee interviews added operational information on how PREP grantees and providers offer educational and career programming. Based on these sources, recommendations for grantees include:

1. **Decide the scope of educational and career programming, and carefully select programming to cover the topics.** Educational and career programming can cover multiple topics, but many grantees reported having limited time to implement APS programming. Programs interested in offering educational and career programming should decide on focal topics. Covering postsecondary and career planning may be easier to fit into a limited window, as providing academic and extracurricular subjects requires more time.

While many curriculum for the prevention of pregnancy and STIs among youth cover some APS content, they generally provide limited coverage of educational and career topics. Grantees will likely need to identify additional content beyond their curriculum for pregnancy and STI prevention to cover educational and career content. During interviews, grantees described developing materials and activities related to postsecondary and career planning. By developing activities, grantees had the flexibility to tailor the content to their populations. However, these activities are unproven and may bring up unanticipated challenges. Grantees who address academic and extracurricular activities may be able to identify existing curricula instead of developing activities.

2. **Offer rigorous, challenging, planned content.** Program content, especially when linked to academics, should be rigorous and challenging (Hooker and Brand 2009; National Research Council 2004). Although programs should be sensitive to the needs and circumstances of diverse youth populations, including those for whom remedial content may seem more appropriate, all youth need high expectations to achieve academic success (Vacca 2008; Dupper 2008). Although effective instruction and support is required in all areas, youth are more likely to find challenging content engaging than lower-level content. Programs will also be more effective if they intentionally plan the skills or knowledge youth will gain. One review of after-school programs uses the acronym SAFE to describe effective programs; that is, programs should develop skills in a planned **S**equences, use an **A**ctive and participatory approach to activities, spend time **F**ocusing on skill-building activities, and **E**xplicitly target specific skills (Durlak et al. 2015). One benefit of offering a micro-credential for demonstrating mastery of competencies through academic or enriched learning activities is that programs can use that process of designing such a credential to demonstrate the rigor of such programming (Fishman et al. 2018).
3. **Choose appropriate modes of program delivery.** Programs should consider how much to integrate educational and career success in programming on the prevention of pregnancy and STIs. One option is to provide educational and career content during the same sequence of sessions used to deliver a curriculum for pregnancy and STI prevention. This could help grantees link the topics, for example, by connecting discussions of postsecondary and career planning with the need to avoid risky behaviors that could prevent youth from following through on their plans. Also, this helps programming fit within the available time, which is likely limited in school-based programs.

Another option, which a few grantees described during interviews, is to deliver educational and career programming through separate activities. For example, grantees offered activities related to educational and career success through mentoring events, conferences with speakers and panels, and college fairs and visits. These were usually held once or twice a year, and youth from multiple PREP cohorts were invited to attend. Using these formats may allow grantees to cover a number of topics that might be difficult to provide in a classroom. Grantees can also use them to conduct activities a limited number of times with a large number of participants, instead of attempting to deliver them to each PREP cohort, which would require more resources. However, these formats are also harder for grantees to connect to the rest of the program, and grantees may reach fewer participants if some youth who attended sessions covering sexual health do not attend these separate activities.

4. **Provide engaging activities with opportunities for youth voice and autonomy.**

Activities should engage youth so they are motivated to participate, learn, and apply their knowledge after the program ends. Programs can engage youth through experiential activities and, when classroom-style lessons are used, by enhancing didactic lectures with interactive elements such as discussions, games, and role-playing (Durlak et al. 2015; Centers for Disease Control and Prevention 2009; Hammond et al. 2007). Promoting youth involvement should, where possible, go even further to emphasize youth voice and autonomy. This can involve youth collaborating with peers and instructors, assuming leadership roles, and helping plan and make decisions about tasks and activities (National Research Council 2004; Ameen and Lee 2012; Yonezawa et al. 2009; Dupper 2008; Krauss et al. 2016).

Programs may also engage youth through social media and other technology. As some interviewed grantees reported doing with other APSs, programs can use these to deliver educational and career content and communicate with youth outside formal sessions or events. This may be valuable when programs have limited time to offer formal programming. For example, programs providing education or job and career planning could use these to encourage youth to learn more about fields of study and employment that interest them. Some interviewed grantees also covered topics involving social media as part of APS programming; these cases concerned other APSs, but programs could cover relevant educational and career success topics. Examples include using social media and technology for job searching and networking, and the risks that social media can pose regarding employers' decisions about hiring.

5. **Integrate programming with schools.** Because of the central role that schools play in youths' education, much of the literature is focused on school-level interventions that affect not just teachers and classroom instruction but also the school climate and environment (What Works Clearinghouse 2007; Jensen 2009; Durlak et al. 2015; Costello 2014). Some interventions go as far as restructuring the traditional school and classroom setting, such as establishing an alternative school or a co-located but separate "school within a school" for youth facing challenging life circumstances (for example, youth who already dropped out of school, or who are pregnant or parenting) (Dupper 2008; Franklin et al. 2012). This approach helps because supplemental programs are often isolated and not integrated with each other or schools' core academic instruction (Durlak et al. 2015).

Although PREP grantees are unable to implement school-level change, educational and career programming should align as much as possible with what youth are doing and learning in school (including youth enrolled in alternatives to traditional school and classroom settings). Programs should coordinate with schools to ensure that programming aligns with school instruction. This includes any curricular or thematic focus at the school, such as the STEM disciplines of science, technology, engineering, and math; the arts; or one or more occupational fields (National Research Council 2004). It might also include other programs operating at the school. Programs that are not school-based may have less opportunity to align with schools.

6. **Engage families.** Recognizing that family involvement is critical for youth learning, programs can magnify their influence by engaging parents to reinforce the program (Stanard et al. 2010; Bailey and Bradbury-Bailey 2010). With some children living with other primary caregivers, such as extended family or foster parents, programs should be prepared to engage those caregivers where appropriate. Also, when engaging families, programs should include not just mothers but also fathers (Dumka et al. 2013). The roles of parents and other caregivers may vary in intensity, from talking with and encouraging their child to engaging with the child in program-related activities such as becoming more involved in college and career planning. Similarly, the programs' approaches to family engagement can be passive or active, ranging from requiring that youth involve their parents in at-home activities to communicating directly with parents or providing direct training and assistance to parents (for example, on how to help their children practice learning-related skills) (Ruffolo 2008; Centers for Disease Control and Prevention 2009; Hammond et al. 2007; Henderson and Mapp 2002; Durlak et al. 2015). A few grantees described engaging families through separate activities such as a "restaurant night" or a board game event. Although the interviewed grantees mentioned activities that covered other APSs, future grantees could involve parents in similar activities for educational and career success, such as an event on postsecondary education or career planning.
  7. **Partner with community organizations and employers.** Programs can partner with community organizations to further support youths' educational and career success. These organizations may have unique resources and strengths that programs can leverage and build on (Policy Studies Associates 2014; Olguin and Keim 2009; Hooker and Brand 2009; National Research Council 2004; Henderson and Mapp 2002). Local colleges may partner to assist youth with college planning and offer opportunities to earn college credit (Afterschool Alliance 2011). Local employers may support career success by providing opportunities that schools may not be able to offer (such as internships) and modeling success to youth. For example, through one community initiative, employers commit to providing part-time jobs to youth and mentoring them (Hooker and Brand 2009). Other community organizations might partner on opportunities such as service learning or volunteer projects (Berger et al. 2019). The interviewed grantees frequently used partners for educational and career programming. Many grantees brought in guest speakers from colleges and employers (including entrepreneurs and small-business owners) to present to youth.
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8. **Tailor programming to the diverse populations served by PREP.** Programs should consider whether to tailor educational and career content based on characteristics such as grade level or gender or when serving specific populations. For example, on postsecondary education and career planning, programs might want to focus on exposing younger youth to an overview of options while providing older youth with specific assistance, such as help with filling out college applications, being interviewed, and writing resumes. Youth of different grade levels may benefit from receiving programming in a cohort where they can learn from one another. For example, middle school youth may benefit from hearing older youth discuss their high school experiences.

Modes of delivery might also have to vary. Interviewed grantees implementing in school-based settings commonly used weekly or biweekly sessions of about 45 minutes to an hour. However, programs in settings where youth might stay for varying periods of time, such as residential programs or programs serving youth involved in the justice system, were more likely to report delivering a shorter program or condensing it into a shorter period. Programs might also want to allow facilitators flexibility to customize programming based on learning styles and youth needs. For example, many alternative schools use individualized curricula that allow students to proceed at different paces (Dupper 2008; Franklin et al. 2012). PREP facilitators may need to tailor program delivery similarly.

Finally, many youth face barriers to learning. Educational and career programs may be more effective if they offer youth, especially those facing challenging life circumstances, support services to enable learning. For example, youth who are pregnant or parenting may need assistance with child care or transportation (Healthy Teen Network 2009; Costello 2014); youth in juvenile detention may need aftercare programs to help them find employment after their release (Ameen and Lee 2012); and youth in foster care may benefit from joint assistance from education and child welfare agencies with independent living skills (Vacca 2008). Other services, such as counseling, health, mental health, or nutrition support, may benefit a range of youth (Hopson et al. 2014). Programs could partner with community partners for these services.

9. **Develop skilled and knowledgeable staff.** As with all interventions, educational and career programs should be well implemented, which requires that the program have organizational resources and processes in place. A critical element is preparing high quality staff through recruiting, hiring, training, and other professional development (Durlak et al. 2015; Hammond et al. 2007; Dupper 2008; Berger et al. 2019). Interviewed grantees reported that most APS content was delivered by the same staff who delivered curriculum for pregnancy and STI prevention. This may require additional training, though only a few interviewed grantees reported providing APS-specific training to staff. Staff may also need training in specific competencies, such as effectively engaging with families (Henderson and Mapp 2002). Incorporating volunteers may also be beneficial, such as engaging current college students or employers as mentors (Afterschool Alliance 2011; Mallett 2012). Another strategy that several grantees described is using guest speakers with topical expertise.



**10. Build organizational capacity for implementation.** Programs should build organizational systems and processes to enable stronger implementation. These could include monitoring curriculum implementation to ensure fidelity, effectively using assessments and data, and using planning-implementation-monitoring loops to improve activities (Hammond et al. 2007; Durlak et al. 2015; Hooker and Brand 2009). Programs can also set up professional learning structures and practices so staff can collaborate on improving implementation (Berger et al. 2019). Some of the strategies mentioned earlier, like partnering with other organizations, are important for leveraging resources the program might not have. Programs also need to consider dosage and duration; those that offer more sessions and have youth attend more sessions should see better outcomes than programs that are short or struggle with attendance (Little and Harris 2003; Vandell et al. 2007; Hammond et al. 2007). However, programs may be limited in the number of sessions they can offer. In addition, if a program is poorly implemented, even longer programs with good attendance may not have the desired impacts (Durlak et al. 2015). Finally, regardless of content or curricula, programs should, as part of implementation, focus on building relationships between staff and youth and creating a supportive climate.

## H. Outcomes

The reviewed literature suggested several outcomes that might be realized by addressing educational and career success. The study team organized outcomes into two categories—enhanced and expanded—based on whether they focus on outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced) or changes to outcomes not related to the prevention of pregnancy and STIs among youth (expanded). The model is limited to outcomes supported by the literature review.

The team further organized outcomes as short-term, intermediate, and long-term. *Short-term* outcomes are those one would expect to see directly following a program. Typically, such outcomes include initial changes in knowledge and attitudes, but they can also include immediate changes in behavior. *Intermediate* outcomes are the step between short- and long-term outcomes. They can include improved skills or changes in behavior that result from the acquisition of new knowledge and skills. Programs may expect to see these outcomes six months to a year after program completion. *Long-term* outcomes are those one would expect to see a year or more after program completion. Depending on when youth attend the program, this could be during middle or high school or even after high school and continuing into adulthood.

**Enhanced outcomes.** If PREP programs address educational and career success, the additional programming may also affect outcomes related to the prevention of pregnancy and STIs among youth. For example, there is evidence that youth who believe that adults and peers in their school care about them and their learning have more protection from a range of risky behaviors, including early sexual initiation (Centers for Disease Control and Prevention 2009). Theoretically, there are areas where outcomes related to educational and career success, especially short-term outcomes related to attitudes and behaviors, could also support outcomes related to the prevention of pregnancy and STIs among youth. However, evidence for these connections was generally not discussed in the articles reviewed. One potential connection is that youth who have higher self-efficacy about their ability to learn and their future potential may be more likely to avoid risky sexual behaviors that could interfere with their plans. Similarly, youth

who use social and emotional skills to improve learning-related behavior may also find it easier to use those skills to avoid involvement in risky behaviors, such as sexual activity or substance use.

Because of these potential connections, several existing interventions target multiple domains at the same time, including pregnancy prevention, substance use prevention, and academic achievement (Shuger 2012; Little and Harris 2003; Durlak et al. 2015). In some cases, evidence on these interventions does show improvement in all domains (Afterschool Alliance 2008). This includes some programs for special populations of youth, such as pregnant and parenting teens. These programs have been shown to help youth complete education and prepare for a career as well as reduce repeat pregnancies (Costello 2014).

**Expanded outcomes.** The literature suggests that addressing educational and career success content in PREP may result in changes to outcome domains beyond the prevention of pregnancy and STIs among youth health. These potentially affected domains reflect two pathways that occur over time: (1) the path from attitudes to behavior to achievement, as described in the theory of change; and (2) the path that youth follow as they develop, moving from achievement in school to graduating from high school to postsecondary education and having a career. In the short term, programs can affect youths' attitudes in several areas. First, they can increase engagement in school and learning, which includes motivation, interest, confidence, perseverance, and connectedness (Centers for Disease Control and Prevention 2009). Second, they can increase students' learning-related skills—especially social and emotional ones—including those involving self-awareness, self-management, persistence and coping, social awareness, relationships, problem solving, and responsible decision making (Durlak et al. 2015; Krauss et al. 2016). Finally, participating in programs can help youth hold higher future expectations and aspirations, and then to develop clear plans for their future education and career.

Related to intermediate outcomes, changes in youths' attitudes and behavior should lead to improved academic effort and habits such as studying and participating in class, school attendance, and fewer disciplinary infractions (such as referrals or suspensions). Another intermediate outcome is improved academic achievement and performance, which reflects stronger academic knowledge, skills, and abilities. These are most commonly measured by grades and test scores, but they also include educational attainment through being less likely to repeat a grade and through earning more high school credits. Although the literature rarely examined work experience and skills as an intermediate outcome, one review found that programs led to improvements in this area (Little and Harris 2003). These then lead to long-term outcomes, which should reflect and coincide with continued application of career and learning skills (Krauss et al. 2016). Although long-term outcomes can be achieved through multiple paths, conceptually they start with earning a high school diploma or GED. The next outcomes are enrolling and completing postsecondary education, including both academic and vocational programs. Finally, youth—now young adults—move into the labor market. Common career outcomes are gaining employment and earnings; other measures of long-term career success and well-being are having work with opportunities for growth and job satisfaction. Positive employment outcomes could also involve well-paying, consistent work in fields requiring technical credentials, as an alternative to careers requiring a college degree.

## **I. Conclusions**

Educational and career success is critical for youths' well-being in life, and accomplishing such success requires that youth exert considerable effort and skill. Despite the challenging contextual risk factors that many youth face, all youth have the potential to succeed by drawing on their strengths, protective contextual factors, and experiences in programs such as PREP. Fortunately, there are many possible topics programs can cover and approaches they can take to support the learning-related attitudes, behaviors, engagement, and skills that influence educational and employment outcomes. Programs should consider the full range of postsecondary education and workforce options and design their activities to meet the needs of the predominantly at-risk and disadvantaged populations served by PREP grantees.

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