RENNIE CENTER
for Education Research & Policy

POLICY BRIEF

Student Learning Plans:
Supporting Every Student's Transition to College and Career

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Introduction

In Massachusetts and nationally, policymakers and education leaders are pushing for more relevant college- and career-ready standards, developing assessments to measure student performance against those standards, and creating new longitudinal data systems to collect and use secondary and postsecondary information to improve student outcomes and ensure accountability.[1] A key challenge facing educators within this new agenda is implementing supports and activities that ensure all students graduate with the skills and knowledge needed to enter the workforce or complete a postsecondary training certificate or degree. Emerging research has led stakeholders from various perspectives to argue that engaging in the development of learning plans may improve outcomes for students transitioning from high school to college and careers.[2]

"The education system we re-create together will focus on the individual learning needs of each student. Gone are the days of a one-size-fits-all diploma. Students will learn what they need to succeed, but they will do it at a pace that suits their learning styles and abilities."

Governor Deval Patrick, June 25, 2008[4]

Student learning plans (SLPs)[3] represent an emerging practice in how public schools across the country are supporting the development of students' college and career readiness skills. Learning plans are student-driven planning and monitoring tools that provide opportunities to identify postsecondary goals, explore college and career options and develop the skills necessary to be autonomous, self-regulated learners. Learning plans have been linked to a variety of developmental outcomes, including improved academic motivation, engagement, decision-making and personal accountability—characteristics that are increasingly seen as essential for success in postsecondary education and work.[5]

Currently, learning plans are required in Massachusetts for certain subsets of students. Under Massachusetts statute, four-year career plans are required for students enrolled in vocational technical education programs.[6] These plans build upon students' interests and skills, provide a mechanism for students to create portfolios of work, and connect academic learning to long-term career goals. Massachusetts law also requires Educational Proficiency Plans (EPPs)[7] for students who do not pass grade 10 Massachusetts Comprehensive Assessment System (MCAS) tests. Students with EPPs receive ongoing instruction and support in the subjects in which they are not yet proficient and take part in assessments to monitor progress toward meeting proficiency standards.[8] Most recently, state policymakers are considering whether all middle and high school students should be required to develop learning plans. Legislation is currently pending in Massachusetts that calls for the Executive Office of Education to convene an advisory group to investigate and study a development and implementation process for six-year career planning to be coordinated by licensed school guidance counselors for all students in grades 6 to 12.[9]

The need is great for innovative practices to support students as they strive to meet more rigorous academic standards in high school, engage in postsecondary education or training, and find gainful employment. The economy is rapidly changing and employers are demanding more and higher-level skills than ever before. There is also widespread agreement among economists that individuals must continue to build skills throughout their professional lives in order to adapt to an increasingly dynamic global economy. By some estimates, over 60% of jobs in America will require some postsecondary education by 2018.[10] Educational attainment, moreover, is a strong predictor of future economic, health and social well-being.[11] The Obama Administration has set a goal for the U.S. to have the best educated workforce and highest proportion of college graduates by 2020, calling on all Americans to commit to taking at least one year of higher education or career training after high school.[12]

"In the U.S., our goal should be to assist every young adult beginning at the end of middle school to develop an individualized pathway plan that would include career objectives; a program of study; degree and/or certificate objectives; and work-linked experiences."[13]

Pathways to Prosperity Project, Harvard Graduate School of Education

While researchers and educators have been promoting SLPs as a reform strategy to personalize the learning environment for nearly twenty years, more recently state policymakers are looking at learning plans as a strategy to address gaps in students' college and career readiness. Increasingly, state legislatures are passing legislation to require SLPs as part of efforts to strengthen high school graduation requirements and align those requirements to new college- and career-ready standards. In fact, nearly half of all states nationwide now require students to develop career-focused learning plans during their middle and high school years. This trend in SLP implementation is gaining more support from researchers, who are beginning to study the impact of long-term career planning activities on students' transition to postsecondary life.

This policy brief provides an overview of the trends in state laws and regulations that require students to develop SLPs as a requirement for graduation and provides an overview of the research on the effectiveness of SLPs to improve student outcomes. The brief is intended to inform current policy discussions in Massachusetts about whether and how to mandate the use of SLPs to better prepare students for successful transitions to postsecondary education and the workforce.

Purpose and Methods

The purpose of this policy brief is to provide policymakers in Massachusetts with a better understanding of what student learning plans are as well as how and to what extent their use is mandated in other states. The brief also summarizes the evidence of SLPs' impact on student outcomes. This brief is organized into five major sections:

1. An overview of SLPs and the rationale for their use in public K-12 education.

2. An overview of the research on the effectiveness of SLPs on improving a variety of student outcomes, including engagement, responsibility, motivation, long-term postsecondary college and career planning.

3. Current state trends in mandating SLPs for all students, including the structure and implementation of SLPs, their connection to other high school reform initiatives and their alignment with state and federal career awareness and workforce development initiatives.

4. Promising implementation strategies.

5. Considerations for state policymakers.

This brief is based on a review of recent literature and research regarding both the rationale for SLPs and the evidence of their effectiveness in improving a range of student outcomes. Research for the brief also involved a state-by-state review of state education agency websites and state statutes to identify regulatory trends in current efforts to mandate that students develop SLPs, and the alignment of these mandates to school reform and new college and career readiness standards.

Student Learning Plans: An Overview

Student learning plans, often referred to as "roadmaps," assist students in creating courses of study that are aligned with high school graduation requirements, personal interests, and individually-defined career goals. Learning plans are dynamic documents that are updated regularly as students' educational and career goals change. They are developed collaboratively by students, parents and school staff, including teachers and guidance counselors. Students use learning plans to reflect upon and document their skills, hobbies, accomplishments, academic record, personal goals, career interests and other information relevant to them as individuals. Learning plans also include provisions for portfolio development and assessment of student progress toward defined objectives.

SLPs are different from Individual Education Plans (IEPs), which have been mandated for all students with a documented disability under the Individuals with Disabilities Act (IDEA)[14] since 1975, but they share common objectives. Both provide students individualized learning supports, promote high standards for learning and provide postsecondary transitional guidance. Under IDEA reauthorization in the 1990s, provisions for students with disabilities included mandates for states to develop a transition plan for postsecondary education and work life as part of a student's IEP by age 16.[15, 16] In 2004, IDEA legislation was further strengthened, requiring states to report on their efforts to provide postsecondary transition supports to students with IEPs.

Influenced in part by experience with IEPs, student learning plans of various types have gained prominence as an instructional strategy in response to two key developments: 1) calls for middle and high schools to become more personalized and student-centered in order to improve academic achievement, student engagement, and healthy youth development, particularly for students at risk of dropping out; and 2) the need to ensure that all students have access to an educational experience that builds the necessary academic, workforce and personal skills required for postsecondary success.

Strategy for Supporting Personalized Learning

Personalized learning emerged as a national school reform initiative during the 1990s as the nation's schools faced substantial achievement gaps, high dropout rates, and escalating youth violence, particularly among students in high-need, urban districts. Educators began to call for new approaches to engage and motivate students, understand and address their individual needs, foster positive adult-student relationships, and provide students an active voice in their learning. In 1996, the National Association for Secondary School Principals published their seminal work, *Breaking Ranks,* which called for a restructuring of the American high school. "The high school of the 21st century must be much more student-centered and above all much more personalized in programs, support services, and intellectual rigor."[17]

Personalization has been defined broadly as a learning exchange between students and educators where schools help students: 1) identify and develop their individual interests and talents; 2) create a pathway toward their long-term goals; 3) work cooperatively with others to accomplish challenging tasks; 4) document accomplishments and work; and 5) demonstrate learning against clear and relevant standards.[18] Learning plans support personalized learning by providing students both a voice and choice in their educational experience. Learning plans have been used to better address the needs of at-risk students, create clear goals and benchmarks for students who have not passed statewide assessments, support specific subgroups of students, including English-language learners, and provide a mechanism to track the progress of students who opt out of state graduation requirements with parental consent.[19]

Strategy for Preparing All Students for College and Careers

Recently, learning plans have become a central component of state and district efforts to ensure all students graduate with clearly defined college and career readiness skills and knowledge. Over the past decade, the push to promote college and career readiness has led to adoption of more challenging graduation requirements in many states[20] and, more recently, the adoption of the Common Core State Standards by nearly all states nationwide. These efforts to promote college and career readiness are aligned with federal legislation that supports school-based workforce development initiatives,[21, 22] including the 1998 Workforce Investment Act[23] and the 2006 Carl D. Perkins Career and Technical Education Improvement Act.[24]

Building upon this legislation, many states have developed comprehensive career guidance programs, expanded activities to connect students to workforce training, and strengthened Career and Technical Education programs and courses of study that focus on career exploration and postsecondary transitions.[25] SLPs play a central role in these efforts for many states, allowing students to select courses and work-based experiences that are aligned with their career interests and to collect documents and other examples of college and career readiness that can assist their transition to life after high school.

"The purpose of the Educational Development Plan is to provide every student with an ongoing and periodically updated record of career planning that will serve as a guide for entering a career of choice."[26]

Michigan Department of Education

A review of literature revealed that organizations promoting student learning plans as an education reform strategy believe SLPs hold great promise as a tool for achieving better academic, career and developmental outcomes. See the Appendix for a summary of this literature.

Research on the Effectiveness of SLPs

Our review found that the empirical research on the effectiveness of SLPs in improving academic achievement, graduation rates, or persistence in postsecondary education or work is limited. However, there is a growing body of research on the impact of SLPs on other student outcomes, such as motivation and engagement, goal setting, long-term planning, increased awareness of career options, and parental involvement in academic and career decisions.[27] The following section provides a review of the research on the effectiveness of student learning plans to improve student outcomes, including initial findings from a multi-year U.S. Department of Labor, Office of Disability Employment Policy study launched in 2008-2009. The study is the first longitudinal research and demonstration project designed to assess SLP effectiveness in fifteen high schools across four states (Louisiana, New Mexico, South Carolina and Washington).[28]

Learning plans have been shown to improve student motivation and engagement. In some educational settings, SLPs have been shown to foster higher levels of student motivation to persist in school and stay engaged in school activities, as well as increasing their overall sense of belonging and connectedness to school.[29] These outcomes were particularly strong for students who: developed plans with challenging academic goals, engaged in community-based career exploration activities, participated in leadership development opportunities, and had high levels of parental involvement in the planning process.[30] Research suggests, moreover, that these outcomes are most prominent when students engage in career planning activities prior to entering high school, rather than during high school only.[31]

Learning plans improve students' understanding of postsecondary options and long-term planning. Research has consistently shown that students who engage in long-term academic and career planning are more aware of postsecondary work and educational opportunities.[32] Surveys of students, educators and parents also suggest that SLP development is most likely to improve students' long-term planning skills when postsecondary goals are connected to immediate action steps that move individual students along a pathway to achieve those goals.[33]

Learning plans improve school-family communication and foster family involvement in academic and career planning. Across multiple studies, students, parents and educators all reported that SLPs led to improved engagement of parents in their children's academic and career planning as well as elevated the level of dialogue between students and parents, and between parents and educators.[34] Parents indicated that the process increased their awareness of the academic expectations for their children as well as the opportunities available to their children to acquire additional academic and workforce skills.[35] Both students and parents also reported that the planning and goal-setting process improved their understanding of the relevancy of academic coursework and other graduation requirements to their long-term career and life goals.[36]

Learning plans have been shown to increase student awareness of their individual strengths and weaknesses. Research has shown that the process of developing learning plans improves students' ability to reflect upon and understand their own skills and interests and areas for improvement.[37] Student skill and interest assessments have been shown to improve teacher awareness of student strengths and weaknesses, leading to more differentiated and personalized classroom instruction and advising.[38]

Learning plans aid students in selecting courses relevant to their career goals. Research has shown that teachers, parents and students believe that when SLPs focus on immediate strategies for students to reach both short- and long-term goals, students are more likely to select courses that are challenging and relevant to college and career interests.[39]

State Trends

Over the past decade, many states have implemented mandatory student learning plans for all students as part of more rigorous graduation requirements aligned with college and career readiness standards. The majority of these states have begun requiring SLPs within the last five years, and seven have established new learning plan requirements since 2009. Many of these initiatives are currently in a pilot phase.

Twenty-three states plus the District of Columbia require that students develop learning plans (see Figure 1). Of these, eighteen states have laws within their statutes that mandate the development of learning plans, while the other five require SLPs through regulation. There are at least three states—Illinois, Rhode Island and Massachusetts—where bills are currently pending in state legislatures that would, respectively, pilot SLPs in selected districts, require all students in middle and high school to develop learning plans, and create an advisory committee to study SLP implementation. Although 27 states do not require learning plans, most of them do provide students an opportunity to develop long-term academic and career plans as a voluntary activity.

Figure 1. National view: State requirements for SLPs

- SLPs required for all students
- SLP legislation pending
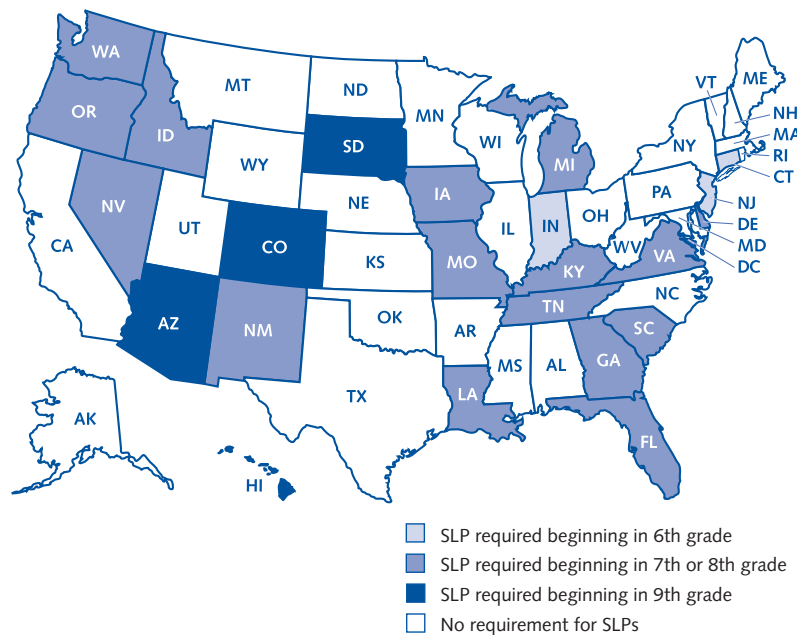- No requirement for SLPs
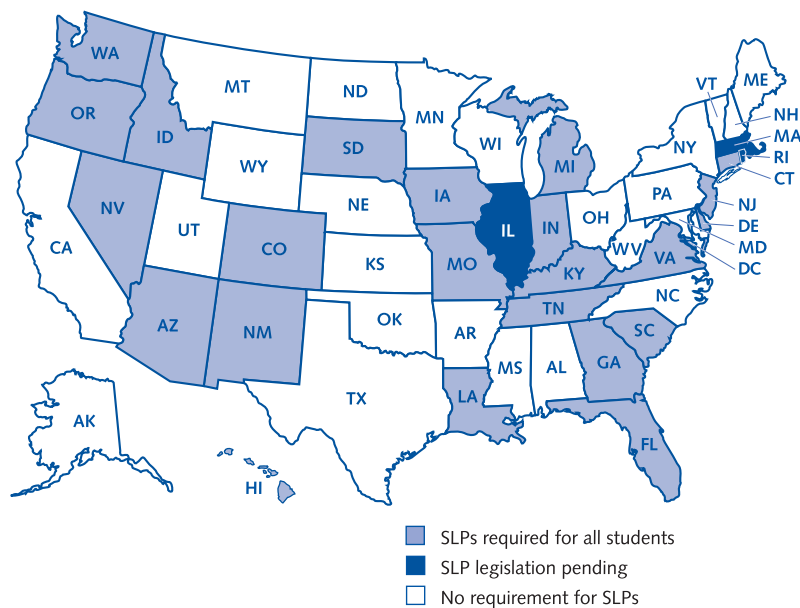
Many states have learning plan requirements for certain subsets of their student body. An analysis of statewide regulations revealed that a number of states, including Alaska, Colorado and Kansas, mandate that all gifted and talented students have a personal learning plan, while California and North Dakota mandate that all English-language learners have a personal learning plan to guide their academic progress. Moreover, many states, including Massachusetts, North Carolina, Mississippi, Texas, and Vermont, have some requirement for the development of learning plans for students who are considered "off-track" academically (as measured by state standardized test scores). Although not required by federal legislation, an increasing number of states, including Massachusetts and New York, require students within Career and Technical Education programs to develop academic and career learning plans.

The timing and length of SLP development varies from state to state. The majority (16) of the 23 states and the District of Columbia that require SLPs begin the process during grades 7 and 8. Five require that students develop learning plans during their high school years, but many of these states include some career exploration activities during the middle school years to prepare students to develop a learning plan in 9th grade. There are an increasing number of states that require students to develop learning plans in grade 6 or earlier. Currently, three states (Connecticut, Indiana and New Jersey) require students to develop learning plans in 6th grade (see Figure 2). Moreover, Kentucky will begin requiring SLPs in 6th grade in 2013 and Tennessee is piloting learning plans for students in grades 1, 4 and 6 in 2010 as part of their Race to the Top[40] initiative.

Figure 2. National view: Requirement by grade-level

☐ SLP required beginning in 6th grade
☐ SLP required beginning in 7th or 8th grade
☐ SLP required beginning in 9th grade
☐ No requirement for SLPs

Across the 23 states and District of Columbia that require some form of SLP, the majority of states require either four- or five-year plans that focus on the high school years. States that mandate students to develop plans at the end of 8th grade or 9th grade generally use the four-year plan, while states that develop plans in 7th grade require five-year plans. In Indiana, students develop an "Initial Graduation Plan" in 6th grade that outlines career exploration activities to guide the development of "Individual Graduation Plans" in 8th grade.

While SLPs generally include provisions for postsecondary planning, three states—Delaware, Kentucky, and New Mexico—explicitly extend the planning one year after graduation. Under Kentucky statute the individual learning plan process includes follow-up with the student twelve months after graduation. In New Mexico, students are required to develop "Next Step Plans" at the end of 8th through 11th grades that outline a course of study for the subsequent year to keep students on track to achieve their postsecondary goals. At the end of their senior year, students develop a "Final Next Step Plan" that outlines a post-graduation transition plan that extends one year beyond high school. These plans are signed and filed by principals at the time of graduation.

State SLP initiatives share many common elements. While there is considerable variation in how states have implemented learning plans, SLPs share a number of common characteristics across states that have adopted them:

- **Collaborative development.** All states that require SLPs require that plans are developed collaboratively by students, parents and school-based staff.

- **Comprehensive focus.** SLPs generally focus on three key goal areas: academic goals (both secondary and postsecondary), career goals and personal goals.

- **Skill and interest assessments.** All states include a process for students to assess and document their skills and interests as part of the planning process.

- **Connection to career pathways.** Plans help students to select specific courses of study aligned with their postsecondary goals and career aspirations.

- **Flexibility.** All states that require SLPs provide provisions for plans to be updated at regular intervals (usually annually) to ensure that plans are responsive to students' changing interests and connect them to school and community-based opportunities.

- **Portfolios.** Most states include portfolio development as part of the planning process to provide students an opportunity to document their academic, extra-curricular, work and personal experiences and achievements to assist in the development of college applications and resumes.

- **Career guidance.** Many states that require all students to develop SLPs have implemented new career guidance initiatives to improve access to regular postsecondary advising through comprehensive K-12 school counseling programs aligned with the American School Counselor Association's national standards.

Many states have implemented SLPs as part of new graduation requirements. Of the 23 states and the District of Columbia that require SLPs, 18 are members of the American Diploma Project Network and instituted learning plans as part of their efforts to align their graduation requirements with more challenging college and career ready standards.[41] For these states, learning plans were promoted both as a vehicle to engage students in long-term academic and career planning, and as a vehicle to educate students and parents about new graduation requirements to improve their ability to stay on track for graduation. While Massachusetts is a member of the American Diploma Project Network, it does not require SLPs for all students statewide.

A small number of states, including Indiana, Kentucky, and Hawaii, provide some credit for the development of learning plans. While most states have embedded additional career exploration and awareness activities during middle school grades as part of efforts to strengthen college and career guidance, others have moved further to create courses of study designed to prepare students for particular careers. Many of these states have replaced tiered diploma systems, which provided different types of diplomas to students based upon multiple sets of standards, with one set of standards and multiple pathways to achieve those standards.

Many states connect their SLP requirements to career "clusters." The reauthorization of the Carl D. Perkins Vocational and Technical Education Act in 2006 recognized the importance of improving academic and workforce readiness skills in all students.[42] It also addressed the need for students to connect coursework and areas of study to the skills and knowledge required by specific occupations. To bolster these efforts, the National Association of State Directors for Career Technical Education Consortium identified 16 "career clusters," or groups of occupations that share similar characteristics and skill sets. Each cluster has a program of study designed to expose students to the requirements necessary to successfully enter specific careers.[43] For many states that mandate SLP development, career clusters serve as the organizing model that ensures students understand the skills and subject matter knowledge needed to move toward a desired career.[44]

The structure and process of SLP implementation varies from state to state. Looking across states that now require student-developed learning plans, there is wide variation in how states are implementing new requirements, the extent to which requirements are aligned with other employment and education initiatives, how efforts are funded, and the level of state oversight and monitoring of implementation progress. South Carolina is one of a small number of states that has connected efforts to require learning plans to broader high school reform and economic development initiatives, and aligned their SLP outcome goals with federal P-16 data system frameworks. As described in the text box on the next page, efforts in South Carolina represent a comprehensive approach to improve students' college- and career-readiness with clear goals, explicit cross-sector collaboration, funding and accountability mechanisms.

South Carolina's Education and Economic Development Act

In 2006 the South Carolina legislature passed the *Education and Economic Development Act* (SC ST SEC59-59-10)[45]—now referred to as *Personal Pathways to Success*[46]—to improve the quality and frequency of individualized educational, academic and career-oriented advisement for all students across the K-12 continuum. The Act funds the development of a new online career information system and career-based curricula, provides professional development for school-based counselors and educators and supports the hiring of career specialists in the state's middle and high schools. It also calls for the creation of Regional Education Centers (RECs) to connect the education and business communities and facilitate the delivery of information, resources and services to students, educators, employers and the community.

As part of the law, schools were required to begin piloting Individual Graduation Plans (IGPs) for students in grades 8 through 10 during the 2007-2008 school year. Under the Act, IGPs must:

1. align career goals and a student's course of study;

2. be based on the student's selected cluster of study and an academic focus within that cluster;

3. include core academic subjects, which must include, but are not limited to English, math, science, and social studies to ensure that requirements for graduation will be met;

4. include experience-based, career-oriented learning experiences including, but not limited to internships, apprentice-ships, mentoring, cooperative education, and service learning;

5. be flexible to allow change in the course of study but be sufficiently structured to meet graduation requirements and admission to postsecondary education;

6. incorporate provisions of a student's Individual Education Plan (IEP), when appropriate; and,

7. be approved by a certified school guidance counselor and the student's parents, guardians, or individuals appointed by the parents or guardians to serve as their designee.

Implementation goals and accountability are central to the Act. Schools are required to submit bi-annual accountability reports that outline their efforts to implement career awareness and development activities that are reported publicly through the state's Department of Education website. Moreover, South Carolina is currently working to link its students' high school and postsecondary education and employment records with their IGPs to assess the effectiveness of the initiative in improving long-term outcomes. The South Carolina Chamber of Commerce, which sees the Act as critical to the state's long-term economic health, has established a goal that by 2020 all students across the K-12 continuum in South Carolina will have an Individual Graduation Plan.[47]

While budget cuts beginning in 2009 have slowed the implementation of the Act, the state continues to make progress toward reaching some of its goals. At the end of the 2010 school year over 95% of all 8th, 9th, 10th and 11th graders had filed electronic IGPs with the state's education department. According to state education officials, over 50% of plans developed by 9th, 10th, and 11th graders involved parental input, while 75% of plans developed by 8th graders included parental input. Among 8th through 10th graders who declared a career major as part of their IGP, the top three clusters included, 1) Health Sciences; 2) Arts, Audio-Video Technology, and Communications; and 3) Science, Technology, Engineering and Math.[48]

Promising Implementation Strategies

Research suggests that regardless of the laws and regulations mandating SLPs, what is really critical to their effectiveness in improving student outcomes is how they are implemented and aligned with broader school and district goals. Researchers and practitioners have begun to identify a number of promising implementation strategies for SLPs that are more likely to lead to positive outcomes for students, including the following:

Teacher commitment and positive student-teacher relationships are critical to successful implementation. Studies designed to assess student and parent perceptions of the value of learning plans have found that students express variation in the quality of the experience depending upon how engaged and interested the teacher or mentor seemed to be in the planning process and ongoing advising.[49] Students who felt they had positive interactions and engagement with their teachers as part of the planning process rated the overall SLP process higher than those who did not.

Strong leadership, clear articulation of program objectives and professional development impact the level of teacher commitment. Evaluations of pilot SLP programs have shown that without a clear set of goals and outcomes communicated by the principal, teachers may view the initiative as just another task to do. Improving communication, providing resources and training for learning plan development and implementing a career-based curriculum to guide advising has been shown to positively affect teachers' level of commitment to the SLP process.[50]

Adequate time must be provided for teachers and students to engage in planning activities. There is wide variation in the amount of time schools are able to dedicate to planning activities, and scheduling challenges are seen as major barriers to effective implementation of SLPs.[51] Parents and students both reported more positive experiences when there were regular check-ins for reflection and guidance, and opportunities to engage in long-term planning and career exploration activities at least two to three times per week. Having more time also results in a more positive mentoring relationship between students and teachers.[52]

Implementation methods must be tailored to local conditions. States vary in how they approach implementing student learning plans. While most states introduce plans as part of guidance and counseling programs, others implement planning activities as part of advisor-advisee programs, or specific academic or career-oriented courses.[54] Our review of research did not find any empirical evidence

> ## Emerging Practice— Student Led Parent/Teacher Conferences
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> Although more research is needed, there is some evidence that student-led parent teacher conferences, with the learning plan as the organizing framework, is a promising strategy to improve SLP implementation. Findings suggest that student-led conferences may lead to a variety of positive outcomes, including improved student-parent communication in long-term goal setting and greater parental engagement in their child's educational experience.[53]

that one approach for implementing SLPs is more effective than another. Educators and students both report improved experiences when advisement on long-term planning occurred in both individual and small-group settings.[55] In some studies, this was particularly true for boys, who were less open to discussing their goals in large class settings.

Access to online career information systems, SLP curricula and other tools improve outcomes. Many states, including Massachusetts, have invested in online career information systems that provide students a number of career exploration and awareness activities, planning tools and electronic portfolios to document academic and life achievements. In states that require student learning plans, these tools, along with access to a curriculum that guides students, teachers and counselors through the planning process, have been shown to improve how students and educators perceive the value of SLPs to promote positive outcomes.[56]

Skill and interest assessments are important components of learning plan development. Across the literature on personalization, learning plans, and college and career readiness, student skill and interest assessments are considered to be important components of the planning process. These assessments can serve a dual function: 1) to direct students toward certain career exploration activities based on their current strengths and interests, and 2) to educate students on what skills they will need to strengthen in order to successfully pursue a specific career interest.

Learning plans must include both long-term and short-term goals and benchmarks. While long-term planning and goal setting is a hallmark of SLP development, the research indicates that a vision for long-term aspirations on its own does not lead to positive outcomes. Research has revealed more positive outcomes when learning plans include simple, actionable strategies that address long-term goals.[57] Short-term goals with clear benchmarks of success provide an opportunity to document achievement along the way and improve students' understanding of the relevancy of academic courses and extra-curricular activities to their postsecondary college, career and life goals.

Career planning activities must be multifaceted and relevant to student interests and goals. Educators and students report that activities related to long-term postsecondary planning must be multifaceted and relevant to individual student needs. Students who did not feel that the SLP process included enough variation of activities to hold their interests often found the SLP process redundant and lacking in relevancy to their long-term goals.[58]

Conclusion

The emerging research on the effectiveness of SLPs to improve student outcomes related to college and career planning is promising. Evidence suggests that when implemented properly, SLPs that are supported by well-trained career counselors, educators and parents, and viewed as an integral part of a student's educational experience may promote a range of positive student outcomes, including improved motivation and engagement, long-term planning skills, increased awareness of career options, and parental involvement in academic and career decisions. These findings support many of the rationales put forth by state policymakers and educators in mandating SLPs at the middle and high school levels (see Appendix). Additional research and improvements in states' longitudinal data systems are needed to make a stronger case for the impact of SLPs on students' secondary and postsecondary academic outcomes, persistence in college and transition to work life.

Considerations for Massachusetts Policymakers

Based on the findings presented in this policy brief, we offer the following considerations for state policymakers.

Learn from states that are pioneers in the implementation of SLPs for all students. Pending legislation in Massachusetts calls for the creation of an advisory group to study a development and implementation process for mandatory career-planning. If this legislation is passed, a critical next step for the advisory group is to examine policies in states that have implemented SLPs as a central component in their college and career planning initiatives. Massachusetts legislators can save time and resources by learning what worked well and what challenges were overcome by other states that are further along in the implementation of this work. Among the 23 states and the District of Columbia that require students to develop SLPs, there are three states that put the requirement into place over five years ago: South Carolina, Florida and Iowa. These three states require learning plans as part of comprehensive education reform and statewide workforce development initiatives to address students' readiness for college and careers. Other states, including Washington and Kentucky, have been identified by researchers and practitioners for their innovative work on SLPs. By drawing upon what has been learned in other states, Massachusetts' advisory group will be better positioned to devise a sound implementation plan. In particular, states that have pioneered the use of SLPs can provide valuable guidance on district and business collaboration, learning plan curriculum development, training for counselors and educators, funding, and metrics that can be used for monitoring implementation and outcomes.

Develop a comprehensive implementation plan. As indicated in this brief, research suggests that ensuring the effective implementation of SLPs is as important as developing laws and regulations to mandate them. Thus, if policymakers decide to mandate SLPs for all students, we encourage state education leaders to develop a comprehensive implementation plan based on research that shows the impact of SLPs on student outcomes and on promising implementation strategies. In this policy brief, we have identified promising implementation strategies (which are described in greater detail on pages 8 and 9). Several issues that should be addressed in an implementation plan are: strategies for engaging parents in SLP development, utilization of student skill and interest assessments, staff training, adequate time in the school schedules for planning and ongoing advisement, the use of online career exploration resources and electronic planning tools, and mechanisms for monitoring implementation and outcomes.

Strengthen career counseling and career awareness activities in Massachusetts schools. A key finding of this brief is the important role teachers, guidance counselors, parents and the business community play in supporting and facilitating students' long-term career goals and their understanding of what is required to reach those goals. State policymakers can support these efforts by ensuring that educators, parents and business leaders have access to training and resources, including career counseling curricula and online career exploration resources that can lead to long-term improvements in how to address the needs of individual students.

Appendix: The Promise of Student Learning Plans

Many education stakeholders, including teachers, administrators, researchers, counselors, and policymakers, believe that, when effectively implemented, student learning plans can help students achieve better outcomes across three domains: academic, career and developmental. A summary of their positions appears below.

Academic—*SLPs can be used to support and maximize each student's ability to learn and master state standards. SLPs can:*

- **Build awareness of graduation requirements.** Supporters believe that developing learning plans builds awareness among students and parents of specific course requirements necessary for graduation to ensure students stay on track.[59]

- **Raise student expectations.** Many argue that students who engage in long-term planning have higher expectations for their own learning and select courses that are both more rigorous and more relevant to their college and career objectives.[60]

- **Foster individualized student supports.** By engaging students in planning discussions and documenting their interests and goals, educators are better able to differentiate supports to meet individual student needs.[61]

- **Make learning relevant.** By connecting academic content to long-term career and life goals, proponents argue that SLPs can help students see that what they learn in school is relevant in the real world and can help them achieve future goals.[62]

Career—*SLPs can enable students to make a successful transition from school to work and from job to job across their professional life. SLPs can:*

- **Connect students to long-term career opportunities.** Learning plans require students to engage in long-term academic, career and personal planning, which is thought to improve students' awareness of opportunities available to them and build their confidence in making choices.[63]

- **Assist in postsecondary transitions.** Proponents argue that learning plans assist students in identifying courses of study and work-based experiences that put them on a pathway to achieving their long-term educational and career goals.[64]

- **Enable portfolio creation.** Learning plans provide students a mechanism to create a portfolio of academic work, achievements, and work-based experiences that can be referenced in college applications and resumes.

- **Serves as a guidance tool.** The American School Counselors Association includes learning plans as a key tool in delivering students' college, career and personal guidance services because they require students to have conversations with counselors and develop a plan for the future.[65]

Developmental—*SLPs can support students' personal and social growth as students progress through school and into adulthood. SLPs can:*

- **Promote engagement and motivation.** Providing students with both a voice and stake in their own educational trajectory is believed to build the engagement and motivation necessary to improve academic outcomes and persistence through graduation.[66]

- **Support life-long learning skills.** Proponents of constructivist theories of learning argue that knowledge is constructed by learners and requires their active participation within a learning exchange between student, teachers and peers. By providing students a central role in setting educational goals with support from a teacher who functions as a mentor and coach, SLPs are thought to build skills necessary for life-long learning.[67]

- **Strengthen decision-making and problem-solving skills.** According to many observers, engaging students in long-term planning builds critical decision-making skills and makes students feel more accountable for their own learning.[68]

- **Foster self-awareness and identity building.** Having students reflect upon their interests, skills and long-term goals builds key developmental assets, including self-awareness, personal identity and responsibility.

Endnotes

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About Nellie Mae Education Foundation

The Nellie Mae Education Foundation is the largest charitable organization in New England that focuses exclusively on education. The Foundation supports the promotion and integration of student-centered approaches to learning at the middle and high school levels across New England. To elevate student-centered approaches, the Foundation utilizes a three-part strategy that focuses on: developing and enhancing models of practice; reshaping education policies; and increasing public understanding and demand for high quality educational experiences. The Foundation's new initiative areas are: District Level Systems Change; State Level Systems Change; Research and Development; and Public Understanding. Since 1998, the Foundation has distributed over $110 million in grants. For more information about the Nellie Mae Education Foundation, visit www.nmefdn.org.

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